

LLNL Livermore Site Second Quarter 2016 Self-Monitoring Report

This quarterly report presents the second quarter 2016 self-monitoring data for the ground water and soil vapor treatment facilities at the Lawrence Livermore National Laboratory (LLNL) Livermore Site. The volumes of ground water and soil vapor treated, and volatile organic compound (VOC) mass removed during the second quarter of 2016 are presented in Tables 1 and 2, respectively. An historical summary of VOC volume and mass removed are presented in Tables 3 and 4, respectively.

Attachment A presents results of ground water treatment facility and extraction well (ground water and soil vapor) VOC, chromium, bioassay, turbidity, and chloride analyses (Tables A-1 through A-5). Metals and radiological analyses are presented in Tables A-6 and A-7, respectively. During the second quarter of 2016, all effluent sample analytical results were within acceptable discharge limits.

Self-monitoring reports for all treatment facilities are presented in Attachment B. Monthly volumes of ground water extracted are shown in Attachment B; however, instantaneous flow rates are not shown for wells that are now only used for sampling and are not continuously pumped. The monthly volume shown for these wells is the quantity of water evacuated for sampling purposes.

A map showing Livermore Site treatment areas and treatment facility locations, and ground water elevation contour maps showing hydraulic capture zones for hydrostratigraphic units (HSUs) 1B, 2, 3A, 3B, 4, and 5, are presented in Attachment C. The contour maps for the individual HSUs are based on data collected during the second quarter of 2016.

Table 1. Volumes of ground water and soil vapor extracted and treated at the Livermore Site, April through June 2016.

Treatment Area^a	Month	Volume of ground water extracted (Kgal)^b	Volume of vapor extracted (Kcf)^b
TFA	April	6,940	-
	May	8,462	-
	June	9,051	-
TFB	April	2,404	-
	May	2,606	-
	June	2,541	-
TFC	April	2,700	-
	May	2,935	-
	June	2,818	-
TFD	April	5,438	1,686
	May	5,942	1,197
	June	5,374	763
TFE	April	2,255	601
	May	2,458	599
	June	2,356	424
TFG	April	251	-
	May	278	-
	June	220	-
TFH	April	617	2,761
	May	716	2,885
	June	646	2,437
TOTAL^c		67,008	13,353

^a Totals include ground water and soil vapor extracted from the following facilities:

TFA area: TFA, TFA-E

TFB area: TFB

TFC area: TFC, TFC-E, TFC-SE

TFD area: TFD, TFD-E, TFD-HPD, TFD-S, TFD-SE, TFD-SS, TFD-W, VTFD-ETCS

TFE area: TFE-E, TFE-HS, TFE-NW, TFE-SE, TFE-SW, TFE-W, VTFE-ELM, VTFE-HS

TFG area: TFG-1, TFG-N

TFH area: TF406, TF406-NW, TF518-N, TF5475-1, TF5475-2, TF5475-3, VTF406-HS, VTF511, VTF518-PZ, VTF5475

TFF started operation in February 1993 for fuel hydrocarbon remediation. In August 1995, the regulatory agencies agreed that the vadose zone remediation was complete, and in October 1996 a No Further Action status was granted for the ground water.

^b Totals are derived from individual extraction wells shown in Attachment B.

^c Rounded number.

Kcf = Thousands of cubic feet.

Kgal = Thousands of gallons.

Table 2. VOC mass removed at the Livermore Site, April through June 2016.

Treatment Area^a	VOC mass removed from ground water (kg)	VOC mass removed from soil vapor (kg)	Total VOC mass removed (kg)^b
TFA	0.7	-	0.7
TFB	0.4	-	0.4
TFC	0.8	-	0.8
TFD	3.9	0.5	4.4
TFE	1.7	0.3	2.0
TFG	0.06	-	0.1
TFH	0.2	2.8	3.0
TOTAL^b	7.8	3.6	11.4

Table 3. Historical summary of volumes of water and soil vapor removed at the Livermore Site through June 2016.

Treatment Area^a	Volume of ground water extracted (Mgal)	Volume of vapor extracted (Mcf)
TFA	2,335	-
TFB	572	-
TFC	638	-
TFD	1,298	163
TFE	478	228
TFG	102	-
TFH	198	350
TOTAL^b	5,621	741

Table 4. Historical summary of VOC mass removed from water and soil vapor at the Livermore Site through June 2016.

Treatment Area^a	VOC mass removed from ground water (kg)	VOC mass removed from soil vapor (kg)	Total VOC mass removed (kg)^b
TFA	223	-	223
TFB	89	-	89
TFC	121	-	121
TFD	926	104	1,030
TFE	250	161	411
TFG	13	-	13
TFH	45	1,315	1,360
TOTAL^b	1,667	1,580	3,247

^a Refer to Table 1 footnote for facilities in each treatment facility area.^b Rounded number.

Abbreviations for Tables 2, 3 and 4:

kg = Kilograms.

Mcf = Millions of cubic feet.

Mgal = Millions of gallons.

VOC = Volatile organic compound.

Attachment A

VOC, Chromium, Bioassay, Turbidity, Chloride, Metals, and Radiological Analyses

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFA													
TFA-I001	04-APR-16	E624MOD	<0.5	0.97	0.59	<0.5	1	<1	<0.5	4.6	<0.5	0.58	<0.5
TFA-I001	03-MAY-16	E624MOD	<0.5	0.88	0.56	<0.5	0.89	<1	<0.5	4.4	<0.5	0.53	<0.5
TFA-I001	01-JUN-16	E624MOD	<0.5	0.9	0.58	<0.5	0.91	<1	<0.5	4.4	<0.5	0.5	<0.5
TFA-E001	04-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E001	03-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E001	01-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E^a													
STU06-I	10-JUN-16	E624MOD	<0.5	<0.5	0.89	<0.5	0.66	2.8	<0.5	65	<0.5	3.2	<0.5
TFB													
TFB-I002	04-APR-16	E624MOD	0.54	2.3	<0.5	<0.5	1.1	<1	2.9	1.1	<0.5	12	<0.5
TFB-I002	03-MAY-16	E624MOD	0.54	2.2	<0.5	<0.5	1.1	<1	2.6	0.93	<0.5	10	<0.5
TFB-I002	01-JUN-16	E624MOD	0.54	2.2	<0.5	<0.5	1.1	<1	2.5	1	<0.5	11	<0.5
TFB-E002	04-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFB-E002	03-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFB-E002	01-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC													
TFC-I003	04-APR-16	E624MOD	<0.5	0.86	<0.5	<0.5	0.61	<1	7.3	3.1	<0.5	11	<0.5
TFC-I003	03-MAY-16	E624MOD	<0.5	0.9	<0.5	<0.5	0.62	<1	7	2.9	<0.5	11	<0.5
TFC-I003	01-JUN-16	E624MOD	<0.5	0.88	<0.5	<0.5	0.57	<1	6.8	2.7	<0.5	10	<0.5
TFC-E003	04-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC-E003	03-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC-E003	01-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC-E													
MTU1-I	07-APR-16	E624MOD	<0.5	9.6	<0.5	<0.5	0.67	<1	11	0.74	<0.5	7.4	3.4
MTU1-I	04-MAY-16	E624MOD	<0.5	11	<0.5	<0.5	0.69	<1	11	0.76	<0.5	7.9	3.8
MTU1-I	07-JUN-16	E624MOD	<0.5	10	<0.5	<0.5	0.72	<1	12	0.77	<0.5	8	3.9
MTU1-E	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU1-E	04-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU1-E	07-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFC-SE													
PTU1-I	05-APR-16	E624MOD	<0.5	4.9	<0.5	<0.5	1.4	<1	13	0.68	<0.5	12	0.87
PTU1-I	04-MAY-16	E624MOD	<0.5	5.2	<0.5	<0.5	1.4	<1	14	0.66	<0.5	12	0.95
PTU1-I	02-JUN-16	E624MOD	<0.5	5.1	<0.5	<0.5	1.3	<1	13	0.69	<0.5	12	0.88
PTU1-E	05-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU1-E	04-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU1-E	02-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD													
TFD-I004	05-APR-16	E624MOD	1.5	1.8	<0.5	<0.5	<0.5	<1	<0.5	0.72	<0.5	33	11
TFD-I004	03-MAY-16	E624MOD	1.7	1.9	<0.5	<0.5	0.69	<1	<0.5	0.89	<0.5	38	11
TFD-I004	02-JUN-16	E624MOD	1.8	1.9	<0.5	<0.5	0.56	<1	<0.5	0.76	<0.5	40	11
TFD-E004	05-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E004	03-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E004	02-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E													
PTU8-I	11-APR-16	E624MOD	2.6	0.89	<0.5	0.52	4.4	<1	<0.5	4.6	<0.5	60	<0.5
PTU8-I	04-MAY-16	E624MOD	2.6	0.96	<0.5	0.87	7.1	<1	<0.5	7.9	<0.5	72	<0.5
PTU8-I	07-JUN-16	E624MOD	2.5	0.76	<0.5	0.52	4.6	<1	<0.5	5.1	<0.5	57	<0.5
PTU8-E	11-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU8-E	04-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU8-E	07-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-HPD													
PTU10-I	13-APR-16	E624MOD	1.4	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	29	<0.5
PTU10-I	04-MAY-16	E624MOD	1.3	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	29	<0.5
PTU10-I	14-JUN-16	E624MOD	1.3	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	30	<0.5
PTU10-E	13-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU10-E	04-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU10-E	14-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-S													
PTU2-I	07-APR-16	E624MOD	<0.5	1.6	<0.5	<0.5	2.8	<1	0.93	4.7	<0.5	35	<0.5
PTU2-I	04-MAY-16	E624MOD	<0.5	1.6	<0.5	<0.5	2.9	<1	1	4.8	<0.5	36	<0.5
PTU2-I	14-JUN-16	E624MOD	<0.5	1.8	<0.5	<0.5	2.7	<1	0.92	4.4	<0.5	34	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFD-S (cont.)													
PTU2-E	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU2-E	04-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU2-E	14-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-SE													
PTU11-I	07-APR-16	E624MOD	<0.5	2.1	0.57	0.96	6.7	<1	0.54	20	<0.5	63	<0.5
PTU11-I	03-MAY-16	E624MOD	<0.5	2.1	0.56	0.96	7.2	<1	0.54	20	<0.5	64	<0.5
PTU11-I	02-JUN-16	E624MOD	<0.5	2.2	0.53	0.93	7.1	<1	<0.5	20	<0.5	63	<0.5
PTU11-E	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU11-E	03-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU11-E	02-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-SS													
PTU12-I	07-APR-16	E624MOD	2.5	2.5	0.61	1.8	9.5	<1	0.67	18	<0.5	130	3.3
PTU12-I	04-MAY-16	E624MOD	2.4	2.5	0.62	2	9.8	<1	0.66	18	<0.5	120	2.9
PTU12-I	07-JUN-16	E624MOD	1.9	2.4	0.59	1.8	9.2	<1	0.6	18	<0.5	120	2.8
PTU12-E	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU12-E	04-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU12-E	07-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-W													
PTU6-I	05-APR-16	E624MOD	<0.5	4.6	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3	27
PTU6-I	04-MAY-16	E624MOD	<0.5	4.8	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3	27
PTU6-I	02-JUN-16	E624MOD	<0.5	4.9	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3	27
PTU6-E	05-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU6-E	04-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU6-E	02-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-E													
PTU3-I	05-APR-16	E624MOD	0.62	4.5	<0.5	0.56	5.9	<1	5	9.3	<0.5	85	<0.5
PTU3-I	03-MAY-16	E624MOD	0.64	4.8	<0.5	0.6	6.4	<1	5.1	9	<0.5	83	<0.5
PTU3-I	02-JUN-16	E624MOD	0.66	4.9	<0.5	0.74	6.5	<1	5.2	9.3	<0.5	88	<0.5
PTU3-E	05-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU3-E	03-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU3-E	02-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFE-HS													
GTU07-I	13-APR-16	E624MOD	2.3	1.4	<0.5	<0.5	3.8	1.8	1.4	3.8	<0.5	150	<0.5
GTU07-I	04-MAY-16	E624MOD	2.8	1.8	<0.5	<0.5	5.2	2.4	1.6	3.8	<0.5	180	<0.5
GTU07-I	14-JUN-16	E624MOD	2.6	1.7	<0.5	<0.5	5.2	2.3	1.7	4.5	<0.5	180	<0.5
GTU07-E	13-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU07-E	04-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU07-E	14-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-NW													
PTU9-I	07-APR-16	E624MOD	<0.5	1	<0.5	<0.5	<0.5	<1	1	<0.5	<0.5	8.5	<0.5
PTU9-I	04-MAY-16	E624MOD	<0.5	1.1	<0.5	<0.5	<0.5	<1	0.99	<0.5	<0.5	8.8	<0.5
PTU9-I	07-JUN-16	E624MOD	<0.5	1	<0.5	<0.5	<0.5	<1	1.1	<0.5	<0.5	9.1	<0.5
PTU9-E	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU9-E	04-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU9-E	07-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-SE													
W-359	05-APR-16	E624MOD	1.9	3.2	<0.5	<0.5	8.9	<1	5	7.6	<0.5	140	<0.5
MTU04-I	03-MAY-16	E624MOD	1.9	3.1	<0.5	0.52	9.4	<1	4.9	7.5	<0.5	130	<0.5
MTU04-I	02-JUN-16	E624MOD	2	3.1	<0.5	<0.5	8.8	<1	4.5	7.1	<0.5	140	<0.5
MTU04-E	05-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU04-E	03-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU04-E	02-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-SW													
MTU03-I	12-APR-16	E624MOD	1	1.6	<0.5	<0.5	0.52	<1	0.52	0.95	<0.5	22	<0.5
MTU03-I	04-MAY-16	E624MOD	1	1.7	<0.5	<0.5	0.53	<1	0.51	0.95	<0.5	23	<0.5
MTU03-I	14-JUN-16	E624MOD	0.94	1.7	<0.5	<0.5	0.52	<1	0.5	0.83	<0.5	21	<0.5
MTU03-E	12-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU03-E	04-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU03-E	14-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-W													
MTU05-I	05-APR-16	E624MOD	<0.5	0.82	<0.5	<0.5	1.3	<1	6	5	<0.5	20	<0.5
MTU05-I	03-MAY-16	E624MOD	<0.5	0.84	<0.5	<0.5	1.3	<1	5.8	4.8	<0.5	20	<0.5
MTU05-I	02-JUN-16	E624MOD	<0.5	0.82	<0.5	<0.5	1.3	<1	6.2	4.8	<0.5	19	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFE-W (cont.)													
MTU05-E	05-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU05-E	03-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU05-E	02-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFG-1													
W-1111	05-APR-16	E624MOD	4.1	7.9	<0.5	<0.5	0.75	<1	0.5	0.96	<0.5	4	<0.5
GTU01-I	04-MAY-16	E624MOD	4	8.3	<0.5	<0.5	0.8	<1	<0.5	1	<0.5	4.3	<0.5
GTU01-I	02-JUN-16	E624MOD	4	8	<0.5	<0.5	0.76	<1	0.5	1	<0.5	4.3	<0.5
GTU01-E	05-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU01-E	04-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU01-E	02-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFG-N													
MTU02-I	05-APR-16	E624MOD	<0.5	1.3	<0.5	<0.5	1.3	<1	1.2	16	<0.5	4.5	<0.5
MTU02-I	04-MAY-16	E624MOD	<0.5	1.2	<0.5	<0.5	1.2	<1	1	16	<0.5	4.2	<0.5
MTU02-I	02-JUN-16	E624MOD	<0.5	1.4	<0.5	<0.5	1.3	<1	1.3	17	<0.5	4.8	<0.5
MTU02-E	05-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU02-E	04-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU02-E	02-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TF406													
PTU5-I	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	2.9	<0.5
PTU5-I	03-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3	<0.5
PTU5-I	02-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	2.9	<0.5
PTU5-E	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU5-E	03-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU5-E	02-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TF406-NW													
W-1801	05-APR-16	E624MOD	<0.5	1.5	<0.5	<0.5	<0.5	<1	2.5	0.81	<0.5	16	<0.5
GTU03-I	04-MAY-16	E624MOD	<0.5	1.7	<0.5	<0.5	<0.5	<1	2.4	0.92	<0.5	18	<0.5
GTU03-I	02-JUN-16	E624MOD	<0.5	1.6	<0.5	<0.5	<0.5	<1	2.7	0.86	<0.5	17	<0.5
GTU03-E	05-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU03-E	04-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU03-E	02-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TF518-N^b													
W-1410	05-APR-16	E624MOD	1.5	1.9	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	10	<0.5
TF5475-1^c													
W-1302-2	13-APR-16	E624MOD	2.4	35	1.4	4.7	26	2.6	8.6	58	<0.5	380	<0.5
TF5475-2													
GTU09-I	07-APR-16	E624MOD	1.2	11	<0.5	1.8	9.6	<1	2.5	21	<0.5	170	<0.5
GTU09-I	03-MAY-16	E624MOD	1.2	11	<0.5	2	9.8	<1	2.5	21	<0.5	160	<0.5
GTU09-I	02-JUN-16	E624MOD	1.2	11	<0.5	1.9	9.9	<1	2.3	20	<0.5	160	<0.5
GTU09-E	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU09-E	03-MAY-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU09-E	02-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TF5475-3^d	---	---	--	--	--	--	--	--	--	--	--	--	--

Notes on following page.

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

^a TFA-E did not operate during the reporting period due to the single extraction well W-254 being dry due to dewatering in the area.

^b TF518-N did not operate during the reporting period due to mixed waste disposition issues.

^c TF5475-1 did not operate during this reporting period due to mixed waste disposition issues.

^d TF5475-3 did not operate during this reporting period due to mixed waste disposition issues.

Notes:

CTET = Carbon tetrachloride

CFORM = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = Volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CTET -<-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFA													
W-109	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	0.52	0.91	<0.5	<0.5	<0.5
W-262	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
W-404	07-APR-16	E624MOD	<0.5	<0.5	0.58	<0.5	0.73	<1	<0.5	3.2	<0.5	<0.5	<0.5
W-408	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	0.59	<0.5	<0.5	<0.5	<0.5
W-415	07-APR-16	E624MOD	<0.5	1.7	0.65	<0.5	1.3	<1	<0.5	7.9	<0.5	1	<0.5
W-457	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	4.1	<0.5	<0.5	<0.5
W-518	07-APR-16	E624MOD	<0.5	<0.5	5.3	<0.5	2.4	<1	<0.5	4	<0.5	<0.5	<0.5
W-522	07-APR-16	E624MOD	<0.5	<0.5	1.2	<0.5	0.78	<1	<0.5	2.4	<0.5	<0.5	<0.5
W-605	07-APR-16	E624MOD	<0.5	<0.5	0.65	<0.5	0.73	<1	<0.5	9.1	<0.5	<0.5	<0.5
W-614	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	3.5	<0.5	<0.5	<0.5
W-712	07-APR-16	E624MOD	2.6	2.7	1	<0.5	2.9	<1	<0.5	1.9	<0.5	2.8	<0.5
W-714	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	4.7	<0.5	<0.5	<0.5
W-903	07-APR-16	E624MOD	<0.5	<0.5	0.62	<0.5	0.53	<1	<0.5	3.5	<0.5	<0.5	<0.5
W-904	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	0.58	<1	<0.5	3.6	<0.5	<0.5	<0.5
W-1001	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
W-1004	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	1.8	<0.5	<0.5	<0.5
W-1009	07-APR-16	E624MOD	0.89	3.8	0.57	<0.5	2.2	<1	<0.5	8.3	<0.5	1.5	<0.5
TFA-E^a													
W-254 ^b	14-JAN-16	E624MOD	<0.5	<0.5	0.65	<0.5	0.58	2	<0.5	63	<0.5	2.1	<0.5
TFB													
W-357	04-APR-16	E624MOD	1.4	3	<0.5	<0.5	1	<1	2.6	0.97	<0.5	25	<0.5
W-610	04-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	0.51	<1	0.69	<0.5	<0.5	0.91	<0.5
W-620	04-APR-16	E624MOD	<0.5	0.7	<0.5	<0.5	0.65	<1	0.94	0.72	<0.5	2.3	<0.5
W-621	04-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	0.97	<0.5
W-655	04-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	5.6	<0.5	<0.5	0.56	<0.5
W-704	04-APR-16	E624MOD	0.58	3.7	<0.5	<0.5	2	<1	5.4	2	<0.5	15	<0.5
W-1423	04-APR-16	E624MOD	0.78	4.5	<0.5	<0.5	2.7	<1	2.8	1.6	<0.5	7.8	<0.5
W-2501	04-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	1	<0.5	<0.5	3.1	<0.5
W-2502	04-APR-16	E624MOD	<0.5	2.1	<0.5	<0.5	1.1	<1	<0.5	<0.5	<0.5	2	<0.5
TFC													
W-701	04-APR-16	E624MOD	<0.5	1.5	<0.5	<0.5	1.1	<1	16	2.6	<0.5	19	<0.5
W-1104	04-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	1.5	3.3	<0.5	5.8	<0.5
W-1116	04-APR-16	E624MOD	<0.5	0.82	<0.5	<0.5	<0.5	<1	4.1	3.6	<0.5	8.1	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFC-E													
W-368	07-APR-16	E624MOD	<0.5	4.3	<0.5	<0.5	<0.5	<1	13	2.2	<0.5	9.8	2.6
W-413	07-APR-16	E624MOD	<0.5	11	<0.5	<0.5	0.76	<1	11	<0.5	<0.5	6.7	3.7
TFC-SE													
W-1213	29-JUN-16	E624MOD	<0.5	5.4	<0.5	<0.5	1.6	<1	8.5	<0.5	<0.5	9.8	0.61
W-2201	29-JUN-16	E624MOD	<0.5	5.7	<0.5	<0.5	1.4	<1	15	0.83	<0.5	14	0.99
TFD													
W-351	05-APR-16	E624MOD	10	1.9	<0.5	0.64	3.5	<1	1.8	4.1	<0.5	190	2.4
W-653	05-APR-16	E624MOD	13	4.1	<0.5	<0.5	<0.5	<1	1.8	0.52	<0.5	380	<0.5
W-2011	05-APR-16	E624MOD	<0.5	0.56	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	7.4	<0.5
W-2101	05-APR-16	E624MOD	3.8	1.4	<0.5	<0.5	<0.5	<1	0.65	<0.5	<0.5	110	<0.5
W-2102	05-APR-16	E624MOD	9.5	3.4	<0.5	<0.5	<0.5	<1	1.2	<0.5	<0.5	300	<0.5
W-1206	05-APR-16	E624MOD	0.6	2.4	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	10	<0.5
W-1208	05-APR-16	E624MOD	1.6	1.6	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	35	20
W-3101	05-APR-16	E624MOD	<0.5	1.5	<0.5	<0.5	1	<1	0.54	2.4	<0.5	21	<0.5
W-3102	05-APR-16	E624MOD	0.64	1.1	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	5.3	12
TFD-E													
W-2006	11-APR-16	E624MOD	1.1	2	3.6	10	82	1.5	<0.5	90	<0.5	530	<0.5
W-1301	11-APR-16	E624MOD	6.1	2.5	1.8	5.3	45	<1	0.62	48	<0.5	250	<0.5
W-1303	11-APR-16	E624MOD	2.4	1.5	<0.5	0.7	2.5	<1	<0.5	3.1	<0.5	94	3.4
W-1306	11-APR-16	E624MOD	1.5	1.4	<0.5	<0.5	<0.5	<1	<0.5	2	<0.5	49	<0.5
W-1307	11-APR-16	E624MOD	2.5	0.54	<0.5	<0.5	<0.5	<1	<0.5	0.67	<0.5	30	<0.5
W-1550	11-APR-16	E624MOD	5.8	3.7	<0.5	<0.5	0.75	<1	<0.5	1.9	<0.5	120	<0.5
W-2203	11-APR-16	E624MOD	8.1	2.2	<0.5	<0.5	1.5	<1	1.6	5.1	<0.5	84	<0.5
TFD-HPD													
W-1254	13-APR-16	E624MOD	1.4	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	30	<0.5
W-1650	09-JUN-16	E624MOD	1.5	1.2	<0.5	<0.5	<0.5	<1	1.1	<0.5	<0.5	92	<0.5
W-1653	09-JUN-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	38	<0.5	<0.5	<0.5	15	<0.5
W-1655	14-APR-16	E624MOD	<0.5	1.2	<0.5	<0.5	<0.5	<1	<0.5	2	<0.5	37	<0.5
W-1657	14-APR-16	E624MOD	8.5	4.3	<0.5	<0.5	<0.5	1.4	2.4	<0.5	<0.5	1100	<0.5
TFD-S													
W-1503	07-APR-16	E624MOD	0.89	1.3	<0.5	<0.5	0.8	<1	0.51	1.4	<0.5	27	<0.5
W-1504	07-APR-16	E624MOD	<0.5	1.1	<0.5	<0.5	5.8	<1	1.5	9.7	<0.5	50	<0.5
W-1510	07-APR-16	E624MOD	<0.5	1.5	<0.5	<0.5	0.85	<1	<0.5	2	<0.5	13	<0.5
W-2601	07-APR-16	E624MOD	<0.5	4.5	<0.5	<0.5	1.7	<1	1	3.6	<0.5	38	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFD-SE													
W-314	18-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	0.62	<1	<0.5	1	<0.5	3.7	<0.5
W-2005	18-APR-16	E624MOD	<0.5	0.9	<0.5	<0.5	4.4	<1	<0.5	11	<0.5	20	<0.5
W-1308	18-APR-16	E624MOD	0.58	1	1	2.7	16	<1	<0.5	56	<0.5	99	<0.5
W-1403	18-APR-16	E624MOD	1.7	13	1.2	3.8	29	<1	3.3	80	<0.5	270	<0.5
W-1904 ^b	02-JUN-14	E601	<0.5	<0.5	<0.5	<0.5	1.4	<1	<0.5	13	<0.5	6	<0.5
SIP-ETC-201 ^b	26-JAN-16	E624MOD	<0.5	0.73	2.6	0.95	75	<1	<0.5	380	<0.5	230	<0.5
TFD-SS													
W-1523	07-APR-16	E624MOD	6.1	3.5	<0.5	1.5	11	<1	1.8	16	<0.5	180	<0.5
W-1601	07-APR-16	E624MOD	2.8	2.9	1.1	3.9	16	<1	0.91	68	<0.5	170	<0.5
W-1602	07-APR-16	E624MOD	<0.5	1.5	<0.5	<0.5	<0.5	<1	<0.5	0.88	<0.5	8.1	1.6
W-1603	07-APR-16	E624MOD	1	2.1	0.87	2.3	11	<1	<0.5	17	<0.5	120	6
TFD-W													
W-1215	05-APR-16	E624MOD	<0.5	7.7	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3.6	15
W-1216	05-APR-16	E624MOD	<0.5	4.1	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	1.8	19
W-1902	05-APR-16	E624MOD	<0.5	3.2	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3.3	41
TFE-E													
W-566	05-APR-16	E624MOD	0.71	5.3	<0.5	0.67	5.6	<1	5.6	8.5	<0.5	87	<0.5
W-1109	05-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	12	<1	2.3	21	<0.5	95	<0.5
W-1903	05-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	8.3	<1	2.4	8.2	<0.5	17	<0.5
W-1909 ^b	14-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	9.1	1.1	<0.5	5.4	<0.5	6.5	<0.5
W-2305	19-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	1.5	<1	<0.5	1.9	<0.5	3.2	<0.5
TFE-HS													
W-2105	13-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	0.94	4.6	<0.5	57	<0.5
W-2801	13-APR-16	E624MOD	<0.5	0.81	<0.5	<0.5	1.7	1.6	8	33	<0.5	240	<0.5
TFE-NW													
W-1211	07-APR-16	E624MOD	<0.5	1.2	<0.5	<0.5	<0.5	<1	1.1	<0.5	<0.5	6.5	<0.5
W-1409	07-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	0.93	<0.5	18	<0.5
TFE-SE													
W-359	05-APR-16	E624MOD	1.9	3.2	<0.5	<0.5	8.9	<1	5	7.6	<0.5	140	<0.5
TFE-SW													
W-1516	12-APR-16	E624MOD	<0.5	1.4	<0.5	<0.5	<0.5	<1	0.57	<0.5	<0.5	6.5	<0.5
W-1518	12-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	5.2	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFE-SW (cont.)													
W-1520	12-APR-16	E624MOD	4.6	3	<0.5	1	0.83	<1	<0.5	4.3	<0.5	99	<0.5
W-1522	12-APR-16	E624MOD	8.1	4.5	<0.5	1.6	4.4	4.4	0.57	7.5	<0.5	180	<0.5
TFE-W													
W-292	05-APR-16	E624MOD	<0.5	0.77	<0.5	<0.5	0.91	1.7	1.1	1.2	<0.5	15	<0.5
W-305	05-APR-16	E624MOD	<0.5	0.87	<0.5	<0.5	1.5	<1	8.8	7	<0.5	22	<0.5
TFG-1													
W-1111	05-APR-16	E624MOD	4.1	7.9	<0.5	<0.5	0.75	<1	0.5	0.96	<0.5	4	<0.5
TFG-N													
W-1806 ^b	13-JAN-16	E624MOD	<0.5	1	<0.5	<0.5	<0.5	<1	<0.5	9.3	<0.5	3.2	<0.5
W-1807	05-APR-16	E624MOD	<0.5	1.2	<0.5	<0.5	1.2	<1	1.1	16	<0.5	4.4	<0.5
TF406													
W-1309	18-APR-16	E624MOD	0.61	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	2.8	<0.5
W-1310	18-APR-16	E624MOD	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3.1	<0.5
TF406-NW													
W-1801	05-APR-16	E624MOD	<0.5	1.5	<0.5	<0.5	<0.5	<1	2.5	0.81	<0.5	16	<0.5
TF518-N^a													
W-1410	05-APR-16	E624MOD	1.5	1.9	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	10	<0.5
TF5475-1^a													
W-1302-2	13-APR-16	E624MOD	2.4	35	1.4	4.7	26	2.6	8.6	58	<0.5	380	<0.5
TF5475-2													
W-1108	18-APR-16	E624MOD	1.3	11	<0.5	1.9	10	<1	2.6	21	<0.5	170	<0.5
W-1415 ^b	04-SEP-14	E601	1.4	14	<0.5	2.2	12	<1	4.2	24	<0.5	210	<0.5
TF5475-3^a													
W-1604	24-MAY-16	E624MOD	6.4	69	2.6	16	58	11	17	120	<0.5	980	<0.5
W-1605	10-MAY-16	E624MOD	<0.5	22	<0.5	1.9	1	<1	<0.5	3.2	<0.5	42	<0.5
W-1608 ^b	13-OCT-15	E624MOD	<0.5	11	<0.5	1.6	0.67	<1	<0.5	2	<0.5	20	<0.5
W-1609	10-MAY-16	E624MOD	<0.5	26	<0.5	2	1.8	<1	<0.5	5.4	<0.5	36	<0.5

Notes on following page.

Table A-2. VOC analyses of samples from treatment facility extraction wells.

^a Treatment Facility did not operate during reporting period. Please refer to Table A-1 for details.

^b Most recent VOC sample results available.

Notes:

CTET = Carbon tetrachloride

CFORM = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = Volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE PPM(V/V)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
VTFD-ETCS													
W-1904	22-JUN-16	TO15DIT	<0.027	<0.027	<0.027	<0.027	<0.027	<0.027	<0.027	0.14	<0.027	0.051	<0.027
W-ETC-2003	22-JUN-16	TO15DIT	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.058	<0.011	0.03	<0.011
W-ETC-2004A	22-JUN-16	TO15DIT	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	<0.029	0.17	<0.029	0.073	<0.029
W-ETC-2004B	22-JUN-16	TO15DIT	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	0.31	<0.31	1.4	<0.31
SIP-ETC-201	22-JUN-16	TO15DIT	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	0.061	<0.012	0.043	<0.012
VTFE-ELM													
W-1903	25-APR-16	TO15DIT	<0.13	<0.13	<0.13	<0.13	0.29	<0.13	<0.13	0.21	<0.13	0.62	<0.13
W-1909 ^a	16-NOV-15	TO15DIT	<0.036	<0.036	<0.036	<0.036	0.25	<0.036	0.11	0.1	<0.036	0.13	<0.036
W-2305	25-APR-16	TO15DIT	<0.024	<0.024	<0.024	<0.024	0.043	<0.024	<0.024	0.036	<0.024	0.1	<0.024
W-543-001	25-APR-16	TO15DIT	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	0.51	<0.43	0.62	<0.43
W-543-003	25-APR-16	TO15DIT	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	0.38	<0.27	1.5	<0.27
W-543-1908	25-APR-16	TO15DIT	<0.061	<0.061	<0.061	<0.061	<0.061	<0.061	<0.061	<0.061	<0.061	0.25	<0.061
VTFE-HS													
W-2105	22-JUN-16	TO15DIT	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	0.85	<0.13
W-ETS-2008A	22-JUN-16	TO15DIT	<0.0086	<0.0086	<0.0086	<0.0086	<0.0086	<0.0086	<0.0086	0.015	<0.0086	0.014	<0.0086
W-ETS-2008B	22-JUN-16	TO15DIT	<0.073	<0.073	<0.073	<0.073	<0.073	<0.073	<0.073	0.36	<0.073	0.41	<0.073
W-ETS-2009	22-JUN-16	TO15DIT	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	0.093	<0.042	0.25	<0.042
W-ETS-2010A	22-JUN-16	TO15DIT	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	0.1	<0.09	0.13	<0.09
W-ETS-2010B	22-JUN-16	TO15DIT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
VTF406-HS													
W-217	15-JUN-16	TO15DIT	<0.12	<0.12	<0.12	<0.12	0.46	<0.12	<0.12	0.35	<0.12	1.1	<0.12
W-514-2007A	15-JUN-16	TO15DIT	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	0.094	<0.042	0.24	0.25
W-514-2007B	15-JUN-16	TO15DIT	0.052	<0.037	<0.037	<0.037	0.23	<0.037	<0.037	0.13	<0.037	0.34	<0.037
VTF511													
W-2204	09-MAY-16	TO15DIT	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	0.81	<0.42	8.3	<0.42
W-2205	09-MAY-16	TO15DIT	<0.072	<0.072	<0.072	<0.072	<0.072	<0.072	<0.072	0.081	<0.072	0.9	<0.072
W-2206	09-MAY-16	TO15DIT	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	0.17	<0.12	1.3	<0.12
W-2207A	25-APR-16	TO15DIT	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	<0.031	0.13	<0.031
W-2207B	25-APR-16	TO15DIT	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.94	<0.22
W-2208A	25-APR-16	TO15DIT	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	1.6	<0.12
W-2208B	25-APR-16	TO15DIT	<1	<1	<1	<1	<1	<1	<1	<1	<1	3.9	<1
VTF518-PZ													
W-1615	19-MAY-16	TO15DIT	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	0.71	<0.36	2.6	<0.36
W-2215A	19-MAY-16	TO15DIT	<0.92	<0.92	<0.92	<0.92	<0.92	<0.92	<0.92	<0.92	<0.92	6.3	<0.92

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CTET <-	CFORM -	1,1-DCA -	1,2-DCA -	1,1-DCE PPM(V/V)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
VTF518-PZ (cont.)													
W-2215B	11-APR-16	TO15DIT	<0.033	<0.033	<0.033	<0.033	0.22	<0.033	0.074	0.042	<0.033	0.15	<0.033
W-518-1913	15-JUN-16	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.0068	<0.005	<0.005	0.012	<0.005	0.052	<0.005
W-518-1914	15-JUN-16	TO15DIT	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	0.58	<0.096	<0.096	<0.096
W-518-1915	19-MAY-16	TO15DIT	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	0.13	<0.076	0.52	<0.076
SVB-518-201	15-JUN-16	TO15DIT	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	0.068	<0.034	0.21	<0.034
SVB-518-204	15-JUN-16	TO15DIT	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	1.1	<0.11
VTF5475^b													
W-1605	21-JUN-16	TO15DIT	<0.22	0.48	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	1.8	<0.22
W-1608	21-JUN-16	TO15DIT	<0.07	0.23	<0.07	<0.07	0.11	<0.07	0.081	0.12	<0.07	0.61	<0.07
W-2211	23-JUN-16	TO15DIT	<0.11	0.23	<0.11	<0.11	<0.11	<0.11	<0.11	0.13	<0.11	0.71	<0.11
W-2212	23-JUN-16	TO15DIT	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	0.071	<0.054	0.26	<0.054
W-ETS-507	21-JUN-16	TO15DIT	<0.034	1	<0.034	<0.034	<0.034	<0.034	<0.034	0.21	<0.034	1.2	<0.034
W-2302	23-JUN-16	TO15DIT	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	11	<2.2
W-2303	23-JUN-16	TO15DIT	<0.021	0.021	<0.021	<0.021	<0.021	<0.021	<0.021	0.039	<0.021	0.098	<0.021
SVI-ETS-504	23-JUN-16	TO15DIT	<0.11	0.17	<0.11	<0.11	<0.11	<0.11	<0.11	0.16	<0.11	0.6	<0.11

Notes on following page.

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

^a Most recent VOC vapor sample results available.

^b VTF5475 did not operate during reporting period due to mixed waste disposition issues.

Notes:

CTET = Carbon tetrachloride

CFORM = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = Volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-4. Chromium analyses of influent, effluent and receiving water samples by treatment facility.

Treatment Facility	Sample Station	Date Sampled	Chromium (total)^a mg/L (ppm)	Hexavalent Chromium mg/L (ppm)
TFB	TFB-E002	04-APR-16	0.02	NA
	TFB-E002	03-MAY-16	0.017	NA
	TFB-E002	01-JUN-16	0.015	NA
TFC	TFC-E003	04-APR-16	0.016	NA
	TFC-E003	03-MAY-16	0.019	NA
	TFC-E003	01-JUN-16	0.017	NA
TFC-E	MTU1-E	07-APR-16	0.025	NA
	MTU1-E	04-MAY-16	0.031	NA
	MTU1-E	07-JUN-16	0.03	NA
TFC-SE	PTU1-E	05-APR-16	0.021	NA
	PTU1-E	04-MAY-16	0.024	NA
	PTU1-E	02-JUN-16	0.025	NA
TFD	TFD-I004	05-APR-16	0.011	NA
	TFD-E004	05-APR-16	0.011	0.011

^a A discharge limit of 0.050 ppm is set for total chromium during the dry season (April 1-November 30), and no limit is set for total chromium for the wet season (December 1-March 31); however, a limit of 0.022 ppm hexavalent chromium applies during the wet season. Discharge limits are defined in the Explanation of Significant Differences for metals discharge limits (April 1997).

Shaded values exceeded the discharge limit. See text for explanation.

Table A-5. Bioassay, turbidity, and chloride analyses of effluent samples by treatment facility.

Treatment Facility	Sample Station	Date Sampled	Aquatic Bioassay^a Percent Survival	Turbidity Nephelometric Turbidity Units (NTU)	Chloride (mg/L)
TFD	TFD-E004	05-APR-16	100 (100)	0.17	290

^a Test species was Fathead minnow and the test duration was 96 hours.
Percent survival in the control group samples shown in parentheses.

Note: NA = not applicable

Table A-6. Metals analyses of effluent samples by treatment facility as compared to the instantaneous Maximum.

		Antimony	Arsenic	Beryllium	Cadmium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
		<-	-	-	-	-	mg/L (ppm)	-	-	-	-	-	->
Dry Season ^a (April 1 - November 30)		0.006	0.05	0.004	0.005	1.3	0.015	0.002	0.1	0.05	0.1	0.002	NA
Sample Station	Date Sampled												
TFD													
TFD-E004	05-APR-16	<0.005	<0.005	<0.001	<0.001	<0.005	<0.005	<0.0002	<0.005	<0.005	<0.005	<0.001	<0.01

^a The Explanation of Significant Differences for metals discharge identifies the Instantaneous Maximum concentrations for the dry season (April 1 - November 30).

NA = not applicable

Numbers in **BOLD** print indicate positive values above the detection limit.

Shaded values exceeded the discharge limit. See text for explanation.

Table A-7. Radiological analyses of effluent and receiving waters by treatment facility.

Treatment Facility	Sample Station	Date Sampled	Gross Alpha <-	Gross Beta pCi/L	Tritium ->
TFD	TFD-E004	05-APR-16	9.01	3.04	<100

Numbers in **BOLD** print indicate positive values above the detection limit.

Explanation of Abbreviations

TFA-I001 is a sampling port located immediately prior to the TFA Treatment System.

TFA-E001 is a sampling port located immediately after the TFA Treatment System, at the beginning of the discharge pipeline.

TFA receiving water is routinely sampled at the TFG-ASW location.

TFB-I002 is a sampling port located immediately prior to the TFB Treatment System.

TFB-E002 is a sampling port located immediately after the TFB Treatment System, at the beginning of the discharge pipeline.

TFB-R002 is a sampling station in the drainage ditch north of TFB, located approximately 75 ft downstream from the discharge point.

TFC-I003 is a sampling port located immediately prior to the TFC Treatment System.

TFC-E003 is a sampling port located immediately after the TFC Treatment System, at the beginning of the discharge pipeline.

TFC-R003 is a sampling station in Arroyo Las Positas, located approximately 75 ft downstream from the TFC discharge point.

TFD-I004 is a sampling port located immediately prior to the TFD Treatment System.

TFD-E004 is a sampling port located immediately after the TFD Treatment System, prior to discharge to the Lake Haussmann or to the underground discharge pipeline leading to Arroyo Las Positas.

TFD-R004 is now combined with and collected at the TFC-R003 location. Results are reported under TFC-R003, as approved by the RWQCB.

CRD1-I is a sampling port located immediately prior to the catalytic column in the Catalytic Reductive Dehalogenation treatment unit 1 (CRD1).

CRD1-E is the effluent from the catalytic column in the Catalytic Reductive Dehalogenation treatment unit 1 (CRD1) and then reinjected at W-1302.

CRD2-I is a sampling port located immediately prior to the catalytic columns in the Catalytic Reductive Dehalogenation treatment unit 2 (CRD2).

CRD2-E is the effluent from the last catalytic column in the Catalytic Reductive Dehalogenation treatment unit 2 (CRD2) and then reinjected at W-1610.

GTU01-I is a sampling port located immediately prior to GTU01, which is currently operating in the TFG-1 area.

GTU01-E is a sampling port located immediately after GTU01, which is currently operating in the TFG-1 area.

GTU01 receiving water is routinely sampled at the TFG-ASW location.

GTU03-I is a sampling port located immediately prior to GTU03, which is currently operating in the TF406 Northwest area.

GTU03-E is a sampling port located immediately after GTU03, which is currently operating in the TF406 Northwest area.

GTU03 receiving water is routinely sampled at the TFC-R003 location.

GTU07-I is a sampling port located immediately prior to GTU07, which is currently operating in the TFE Hotspot area.

GTU07-E is a sampling port located immediately after GTU07, which is currently operating in the TFE Hotspot area.

GTU07 receiving water is routinely sampled at the TFC-R003 location.

GTU09-I is a sampling port located immediately prior to GTU09, which is currently operating in the TF5475 area.

GTU09-E is a sampling port located immediately after GTU09, which is currently operating in the TF5475 area.

GTU09 receiving water is routinely sampled at the TFC-R003 location.

MTU02-I is a sampling port located immediately prior to MTU02, which is currently operating in the TFG North area.

MTU02-E is a sampling port located immediately after MTU02, which is currently operating in the TFG North area.

MTU02 receiving water is routinely sampled at the TFC-R003 location.

MTU03-I is a sampling port located immediately prior to MTU03, which is currently operating in the TFE Southwest area.

MTU03-E is a sampling port located immediately after MTU03, which is currently operating in the TFE Southwest area.

MTU03 receiving water is routinely sampled at the TFC-R003 location.

MTU04-I is a sampling port located immediately prior to MTU04, which is currently operating in the TFE Southeast area.

MTU04-E is a sampling port located immediately after MTU04, which is currently operating in the TFE Southeast area.

MTU04 receiving water is routinely sampled at the TFC-R003 location.

MTU05-I is a sampling port located immediately prior to MTU05, which is currently operating in the TFE West area.

MTU05-E is a sampling port located immediately after MTU05, which is currently operating in the TFE West area.

MTU05 receiving water is routinely sampled at the TFC-R003 location.

MTU1-I is a sampling port located immediately prior to MTU1, which is currently operating in the TFC East area.

MTU1-E is a sampling port located immediately after MTU1, which is currently operating in the TFC East area.

Explanation of Abbreviations

MTU1 receiving water is routinely sampled at the TFC-R003 location.

PTU1-I is a sampling port located immediately prior to PTU-1, which is currently operating in the TFC Southeast area.

PTU1-E is a sampling port located immediately after PTU-1, which is currently operating in the TFC Southeast area.

PTU1 receiving water is routinely sampled at the TFC-R003 location.

PTU2-I is a sampling port located immediately prior to PTU-2, which is currently operating in the TFD South area.

PTU2-E is a sampling port located immediately after PTU-2, which is currently operating in the TFD South area.

PTU2 receiving water is routinely sampled at TFC-R003 during the wet season.

PTU3-I is a sampling port located immediately prior to PTU-3, which is currently operating in the TFE East area.

PTU3-E is a sampling port located immediately after PTU-3, which is currently operating in the TFE East area.

PTU3 receiving water is routinely sampled at the TFC-R003 location.

PTU5-I is a sampling port located immediately prior to PTU-5, which is currently operating in the TF406 extraction location.

PTU5-E is a sampling port located immediately after PTU-5, which is currently operating in the TF406 extraction location.

PTU5 receiving water is routinely sampled at the TFC-R003 location.

PTU6-I is a sampling port located immediately prior to PTU-6, which is currently operating in the TFD West area.

PTU6-E is a sampling port located immediately after PTU-6, which is currently operating in the TFD West area.

PTU6 receiving water is routinely sampled at the TFC-R003 location.

PTU8-I is a sampling port located immediately prior to PTU-8, which is currently operating in the TFD East area.

PTU8-E is a sampling port located immediately after PTU-8, which is currently operating in the TFD East area.

PTU8 receiving water is routinely sampled at the TFC-R003 location.

PTU9-I is a sampling port located immediately prior to PTU-9, which is currently operating in the TFE Northwest area.

PTU9-E is a sampling port located immediately after PTU-9, which is currently operating in the TFE Northwest area.

PTU9 receiving water is routinely sampled at the TFC-R003 location.

PTU10-I is a sampling port located immediately prior to PTU-10, which is currently operating in the TFD Helipad area.

PTU10-E is a sampling port located immediately after PTU-10, which is currently operating in the TFD Helipad area.

PTU10 receiving water is routinely sampled at the TFC-R003 location.

PTU11-I is a sampling port located immediately prior to PTU-11, which is currently operating in the TFD Southeast area.

PTU11-E is a sampling port located immediately after PTU-11, which is currently operating in the TFD Southeast area.

PTU11 receiving water is routinely sampled at the TFC-R003 location.

PTU12-I is a sampling port located immediately prior to PTU-12, which is currently operating in the TFD Southshore area.

PTU12-E is a sampling port located immediately after PTU-12, which is currently operating in the TFD Southshore area.

PTU12 receiving water is routinely sampled at the TFC-R003 location.

STU06-I is a sampling port located immediately prior to STU06, which is operating in the TFA East area.

STU06-E is a sampling port located immediately after STU06, which is operating in the TFA East area.

STU06 receiving water is routinely sampled at the TFG-ASW location.

STU09-I is a sampling port located immediately prior to STU09, which is currently operating in the TF518-North area.

STU09-E is a sampling port located immediately after STU09, which is currently operating in the TF518-North area.

STU09 receiving water is routinely sampled at the TFC-R003 location.

Attachment B

Self-Monitoring Reports

Self-Monitoring Report

LLNL Treatment Facility A (TFA)

AREA TFA

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** 10 **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** 23 24 **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): **554**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-04-2016**
Influent pH: **7.5**
Effluent pH: **7.5**
Effluent Temperature (°C): **18.1**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-109	1,440	0.0
W-262	186	0.0
W-404	1,042,112	30.9
W-408	939,141	28.6
W-415	1,276,096	32.8
W-457	260,524	7.8
W-518	139,266	4.1
W-522	452,264	13.8
W-614	353,568	10.8
W-712	136,856	4.2
W-714	172,388	5.2
W-903	387,080	11.3
W-904	457,362	13.8
W-1001	40,748	1.2
W-1004	219,232	6.3
W-1009	757,200	22.5
W-605	304,040	9.4
<hr/>		
Total:	<u>6,939,503</u>	<u>202.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>3,157,503</u>

Self-Monitoring Report (cont'd)
LLNL Treatment Facility A (TFA)
AREA TFA

Arroyo Seco

TFG-ASW

3,782,000

6. Comments:

Facility was shutdown on 04-09-2016 due to W-109 leak fault. Facility was restarted on 04-11-2016. Facility was shutdown on 04-22-2016 due to I/O fault. Facility was restarted on 04-25-2016. Facility was shutdown on 04-18-2016 due to low air flow fault. Facility was restarted on 04-19-2016. Facility was shutdown on 04-28-2016 due to low air fault. Facility was restarted on 04-29-2016.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Shirley K. Gargen C. Date: 05-02-2016

**Self-Monitoring Report
LLNL Treatment Facility A (TFA)
AREA TFA**

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April		<u>30</u>																	
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>				
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>			

Total monthly time facility operated (hours): 688

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>05-03-2016</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>19.2</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-109	0	0.0
W-262	0	0.0
W-404	1,300,836	31.7
W-408	1,197,363	29.2
W-415	1,530,240	40.5
W-457	346,148	9.4
W-614	428,256	10.7
W-1009	991,280	24.0
W-904	330,062	16.1
W-518	174,312	4.1
W-522	556,408	13.0
W-1001	49,092	1.0
W-1004	296,488	7.4
W-605	378,664	9.3
W-712	166,084	3.9
W-714	216,736	5.2
W-903	500,416	12.7
Total:	8,462,385	218.2

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
West Perimeter Drainage Channel	TFB-R002	3,858,785

Self-Monitoring Report (cont'd)
LLNL Treatment Facility A (TFA)
AREA TFA

Arroyo Seco

TFG-ASW

4,603,600

6. Comments:

Facility was shutdown on 04-30-2016 due to low air flow fault. Facility was restarted on 05-02-2016. Facility was shutdown on 05-02-2016 due to low air flow fault. Facility was restarted on 05-03-2016. Facility was shutdown on 05-03-2016 due to low air flow fault. Facility was restarted on 05-04-2016. W-904 pump replaced and restarted on 5-26-16.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: _____

Shirley George

Date: 06-01-2016

Self-Monitoring Report LLNL Treatment Facility A (TFA) AREA TFA

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

Total monthly time facility operated (hours): 717

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-01-2016</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>19</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-109	0	0.0
W-262	0	0.0
W-404	1,340,780	31.7
W-408	1,215,512	28.5
W-415	1,581,728	37.5
W-457	346,936	8.2
W-518	187,724	4.3
W-522	604,400	13.8
W-605	392,440	9.1
W-614	431,280	10.7
W-712	161,332	4.2
W-714	230,064	5.4
W-903	511,768	11.3
W-904	652,432	12.6
W-1001	54,930	1.3
W-1004	315,488	7.3
W-1009	1,024,160	24.2
Total:	<u>9,050,974</u>	<u>210.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>4,090,774</u>

Self-Monitoring Report (cont'd)
LLNL Treatment Facility A (TFA)
AREA TFA

Arroyo Seco

TFG-ASW

4,960,200

6. Comments:

Facility was shutdown on 06-23-2016 due to radio communications failure.
Facility was restarted on 06-24-2016.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve K. George Date: 07-01-2016

Self-Monitoring Report
LLNL Solar Treatment Unit 06 (STU06)
AREA TFA-E

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	

Total monthly time facility operated (hours): 55996

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>0</u>

6. Comments:

Facility secured due to a lack of water in the extraction well.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Jason Hamilton Date: 05-02-2016

Operator Signature: [Signature] Date: **06-06-2016**

Self-Monitoring Report
LLNL Solar Treatment Unit 06 (STU06)
AREA TFA-E

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>0</u>

6. Comments:

Facility secured due to a lack of water in the extraction well.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Joan Hamilton Date: 07-07-2016

**Self-Monitoring Report
LLNL Treatment Facility B (TFB)
AREA TFB**

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): **705**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-04-2016**
Influent pH: **7.0**
Effluent pH: **7.5**
Effluent Temperature (°C): **22.2**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	321,528	7.7
W-610	255,512	6.0
W-620	213,628	5.0
W-621	148	0.0
W-655	200	0.0
W-704	680,816	16.5
W-1423	111,980	2.7
W-2501	672,500	16.1
W-2502	148,077	3.7
Total:	<u>2,404,389</u>	<u>57.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>1,663,645</u>
<u>Building 133 Cooling Tower</u>	<u>TFB-E-B133CT</u>	<u>740,744</u>

6. Comments:

Secured wet season hexavalent chromium treatment on 4-1-16.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility B (TFB)
AREA TFB

Operator Signature: Scott Kawaguchi Date: 05-02-2016

**Land Observation Report date:
TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month April Year 2016

2. Date compliance sampling performed 04-04-2016

3. Weather Conditions:

Average air tempertaure (°C):	<u>12.56</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>4/ SSW</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi Date: 05-02-2016

Self-Monitoring Report

LLNL Treatment Facility B (TFB)

AREA TFB

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	<u>30</u>																
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>		
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>	

Total monthly time facility operated (hours): 762

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>05-03-2016</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>18.5</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	335,888	8.0
W-610	286,636	6.5
W-620	250,860	5.8
W-621	0	0.0
W-655	0	0.0
W-704	731,616	16.3
W-1423	126,768	3.2
W-2501	716,604	15.9
W-2502	157,399	4.1
Total:	<u>2,605,771</u>	<u>59.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>1,493,703</u>
<u>Building 133 Cooling Tower</u>	<u>TFB-E-B133CT</u>	<u>1,112,068</u>

6. Comments:

Facility was shutdown on 05-01-2016 due to low air flow fault. Facility was restarted on 05-02-2016.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility B (TFB)
AREA TFB

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 06-01-2016

Land Observation Report date:
TFB-R002 - West Perimeter Drainage Channel

1. Reporting Period: Business Month May Year 2016

2. Date compliance sampling performed 05-03-2016

3. Weather Conditions:

Average air tempertaure (°C):	<u>15.65</u>
6-day total precipitation (in):	<u>0.09</u>
Average wind speed/direction (mph):	<u>6/ SSW</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi Date: 06-01-2016

Self-Monitoring Report LLNL Treatment Facility B (TFB) AREA TFB

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

Total monthly time facility operated (hours): 729

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-01-2016</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>19.2</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	351,136	8.0
W-610	281,792	6.7
W-620	243,636	5.6
W-621	0	0.0
W-655	0	0.0
W-704	709,264	16.2
W-1423	116,680	2.7
W-2501	679,970	15.7
W-2502	158,950	3.7
Total:	<u>2,541,428</u>	<u>58.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>1,609,746</u>
<u>Building 133 Cooling Tower</u>	<u>TFB-E-B133CT</u>	<u>931,682</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility B (TFB)
AREA TFB

Operator Signature: _____

Shirley K. Gagnier

Date: 07-05-2016

Land Observation Report date:
TFB-R002 - West Perimeter Drainage Channel

1. Reporting Period: Business Month June Year 2016

2. Date compliance sampling performed 06-01-2016

3. Weather Conditions:

Average air tempertaure (°C):	<u>20.97</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>4/ SSW</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Carayon Date: 07-01-2016

Self-Monitoring Report
LLNL Treatment Facility C (TFC)
AREA TFC

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): **704**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-04-2016**
Influent pH: **7.5**
Effluent pH: **7.5**
Effluent Temperature (°C): **19.8**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	579,088	13.8
W-1104	1,006,800	20.8
W-1116	70,366	1.8
Total:	<u>1,656,254</u>	<u>36.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,656,254</u>

6. Comments:

Wet season hexavalent chromium treatment secured on 4-1-16.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **05-02-2016**

**Land Observation Report date:
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month April Year 2016

2. Date compliance sampling performed 04-04-2016

3. Weather Conditions:

Average air tempertaure (°C):	<u>12.56</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>4/ SSW</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Stou Kawaguchi Date: 05-02-2016

Operator Signature: [Signature] Date: 06-01-2016

**Land Observation Report date:
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month May Year 2016

2. Date compliance sampling performed 05-03-2016

3. Weather Conditions:

Average air tempertaure (°C):	<u>15.65</u>
6-day total precipitation (in):	<u>0.09</u>
Average wind speed/direction (mph):	<u>6/ SSW</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi Date: 06-01-2016

**Self-Monitoring Report
LLNL Treatment Facility C (TFC)
AREA TFC**

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 729

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 06-01-2016
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 20.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	611,080	14.0
W-1104	888,592	24.6
W-1116	68,560	1.6
Total:	<u>1,568,232</u>	<u>40.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,568,232</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kowalski Date: 07-01-2016

**Land Observation Report date:
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month June Year 2016

2. Date compliance sampling performed 06-01-2016

3. Weather Conditions:

Average air tempertaure (°C):	<u>20.97</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>4/ SSW</u>

4. Receiving Data:

<u>Sample</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Location</u>		
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-01-2016

Self-Monitoring Report
LLNL Mini Treatment Unit 1 (MTU1)
AREA TFC-E

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 601

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 04-07-2016
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 21.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-368	110,608	3.2
W-413	412,847	11.9
Total:	<u>523,455</u>	<u>15.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>523,455</u>

6. Comments:

Facility was shutdown at 09:55 on 04-01-2016 to remove the resin columns, replace the air stripper trays and replace the cuno filter elements as requested by Paul Anderson. Facility was restarted at 09:28 on 04-05-2016.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 05-05-2016

Self-Monitoring Report
LLNL Mini Treatment Unit 1 (MTU1)
AREA TFC-E

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	<u>30</u>														
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	18	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>			

Total monthly time facility operated (hours): 620

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>05-04-2016</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>20.8</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-368	115,581	3.2
W-413	420,552	11.6
Total:	<u>536,133</u>	<u>14.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>536,133</u>

6. Comments:

Facility was shutdown at 08:40 on 05-12-2016 to conduct a CSFT, download strategy, and perform an interlock check. Facility was restarted at 13:17 on 05-12-2016. Facility was shutdown at 11:15 on 05-17-2016 to replace the controller to work on W-413 speed controller problems. Facility was restarted at 14:08 on 05-19-2016.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty Kline Date: 06-29-2016

Self-Monitoring Report
LLNL Mini Treatment Unit 1 (MTU1)
AREA TFC-E

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

May	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															
June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>				
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>				

Total monthly time facility operated (hours): 816

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-07-2016</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>21.4</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-368	153,507	3.1
W-413	556,907	11.2
Total:	<u>710,414</u>	<u>14.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>710,414</u>

6. Comments:
NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty L. L. L. Date: 07-07-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 1 (PTU1)
AREA TFC-SE

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): **705**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-05-2016**
Influent pH: **7.5**
Effluent pH: **7.5**
Effluent Temperature (°C): **20.8**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	92,052	2.2
W-2201	428,307	10.2
Total:	<u>520,359</u>	<u>12.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>520,359</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Jean Hamilton* Date: **05-02-2016**

Operator Signature: [Signature] Date: **06-08-2016**

Self-Monitoring Report
LLNL Portable Treatment Unit 1 (PTU1)
AREA TFC-SE

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

Total monthly time facility operated (hours): 730

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-02-2016</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>20.9</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	97,044	2.2
W-2201	442,025	10.2
Total:	<u>539,069</u>	<u>12.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>539,069</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-07-2016

Self-Monitoring Report LLNL Treatment Facility D (TFD) AREA TFD

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): **655**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-01-2016**
 Influent pH: **7.5**
 Effluent pH: **7.5**
 Effluent Temperature (°C): **20.4**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-351	94,938	2.7
W-653	3,027	3.0
W-2011	7,200	3.0
W-2101	8,282	3.0
W-2102	14,154	3.0
W-1206	638,368	15.9
W-1208	993,771	25.3
W-3101	270,358	6.8
W-3102	62,717	1.6
Total:	<u>2,092,815</u>	<u>64.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>2,092,815</u>
<u>TFD irrigation supply</u>	<u>TFD-IRR</u>	<u>0</u>

6. Comments:

Facility was shutdown on 04-25-2016 to repair leak. Facility was restarted on 04-26-2016.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility D (TFD)
AREA TFD

Operator Signature: Scott Kawaguchi Date: 05-02-2016

Self-Monitoring Report LLNL Treatment Facility D (TFD) AREA TFD

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	<u>30</u>																					
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>							
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>						

Total monthly time facility operated (hours): 760

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>05-03-2016</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>20.4</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-351	93,629	2.2
W-653	3,349	3.0
W-2011	7,476	3.0
W-2101	8,882	3.0
W-2102	14,762	3.0
W-1206	731,149	16.1
W-1208	1,161,527	25.6
W-3101	315,059	6.9
W-3102	70,060	1.6
<hr/>		
Total:	<u>2,405,893</u>	<u>64.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>2,405,893</u>
<u>TFD irrigation supply</u>	<u>TFD-IRR</u>	<u>0</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility D (TFD)
AREA TFD

Operator Signature: _____

Steve Kawaguchi

Date: 06-01-2016

**Self-Monitoring Report
LLNL Treatment Facility D (TFD)
AREA TFD**

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 639

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 06-02-2016
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 22.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-351	72,495	2.1
W-653	2,876	3.0
W-2011	6,305	3.0
W-2101	7,459	3.0
W-2102	13,345	3.0
W-1206	623,544	16.9
W-1208	955,991	25.8
W-3101	263,896	7.0
W-3102	61,777	1.7
Total:	<u>2,007,688</u>	<u>65.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>2,007,688</u>
<u>TFD irrigation supply</u>	<u>TFD-IRR</u>	<u>0</u>

6. Comments:

System down due to leak on 5-31-16. Restarted on 6-1-16. System down on 6-24-16 for interlock check. Restarted on 6-27-16.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility D (TFD)
AREA TFD

Operator Signature: Scott Kowalski Date: 07-01-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 8 (PTU8)
AREA TFD-E

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 696

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 04-11-2016
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 18.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2006	684	3.4
W-1301	25,945	0.6
W-1306	2,786	2.6
W-1307	196,276	4.4
W-1550	4,729	2.3
W-2203	1,247	1.5
W-1303	36,215	0.8
Total:	<u>267,882</u>	<u>15.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>267,882</u>

6. Comments:

W-2006 shut down at 11:21 on 4-11-16 due to a LTL-Interlock activation while sampling at the well. The startup of W-2006 took place at 13:57 on 4-12-16.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 05-05-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 8 (PTU8)
AREA TFD-E

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April 30
May 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27

Total monthly time facility operated (hours): 672

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 05-04-2016
Influent pH: 7.5
Effluent pH: 7.6
Effluent Temperature (°C): 20.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2006	673	3.4
W-1301	25,119	0.9
W-1306	2,479	2.6
W-1307	186,744	4.8
W-1550	4,407	2.3
W-2203	1,115	1.5
W-1303	32,308	0.8
Total:	<u>252,845</u>	<u>16.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>252,845</u>

6. Comments:
NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy L. Lila Date: 06-08-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 8 (PTU8)
AREA TFD-E

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

May	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															
June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>				
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>				

Total monthly time facility operated (hours): 816

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-07-2016</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>21.5</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2006	808	3.4
W-1301	29,566	0.6
W-1303	39,003	0.8
W-1306	3,014	2.6
W-1307	226,869	4.6
W-1550	5,250	2.3
W-2203	1,286	1.5
Total:	<u>305,796</u>	<u>15.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>305,796</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty K. L. L. Date: 07-07-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 10 (PTU10)
AREA TFD-HPD

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 679

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 04-13-2016
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 21.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1254	126,007	3.7
Total:	<u>126,007</u>	<u>3.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>126,007</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 05-05-2016

Operator Signature: _____ Date: **06-06-2016**

Self-Monitoring Report
LLNL Portable Treatment Unit 10 (PTU10)
AREA TFD-HPD

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

Total monthly time facility operated (hours): 725

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-14-2016</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>21.6</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1254	140,753	2.8
Total:	<u>140,753</u>	<u>2.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>140,753</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-05-2016

**Self-Monitoring Report
LLNL ISB01 (ISB01)
AREA TFD-HPD**

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **661**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **Not Measured**

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1650	704	0.0
W-1653	246	0.0
W-1655	0	0.0
W-1657	0	0.0
Total:	<u>950</u>	<u>0.0</u>

5. Discharge Information:

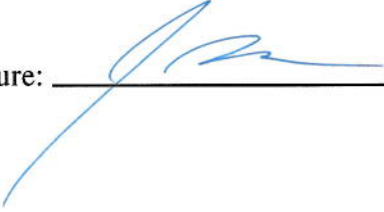
<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>ISB01 injection well</u>	<u>W-1552</u>	<u>950</u>

6. Comments:

Compliance sampling is not required at this facility due to the fact that ISB01 is a closed loop system, and water is not discharged to the environment. Water was circulated through the system but was not treated. Approximately 85 gallons of facility water were added to the pre-mixing tote on 04-04-16 , 70 gallons were added on 04-18-16 and 50 Gallons on 04-19-16 for a total of 205 gallons. Ethyl Lactate injection took place on 04-05-16 and 04-20-16. The facility was down for approximately 11 hrs. for a variety of reasons: Ethyl Lactate injection and filling the pre-mixing tote with facility water and maintenance.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL ISB01 (ISB01)
AREA TFD-HPD

Operator Signature:  _____ Date: 05-05-2016

**Self-Monitoring Report
LLNL ISB01 (ISB01)
AREA TFD-HPD**

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	<u>29</u>	<u>30</u>																													
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 754

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1650	832	0.0
W-1653	268	0.0
W-1655	0	0.0
W-1657	0	0.0
Total:	<u>1,100</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>ISB01 injection well</u>	<u>W-1552</u>	<u>1,100</u>

6. Comments:

Compliance sampling is not required at this facility due to the fact that ISB01 is a closed loop system, and water is not discharged to the environment. Water was circulated through the system but was not treated. Approximately 100 gallons of facility water were added to the pre-mixing tote on 05-17-16 , 100 gallons were added on 05-18-16 for a total of 200 gallons. Ethyl Lactate injection took place on 05-03-16 and 05-18-16. The facility was down for approximately 38 hrs. for a variety of reasons: Ethyl Lactate injection and filling the pre-mixing tote with facility water and maintenance.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL ISB01 (ISB01)
AREA TFD-HPD

Operator Signature: _____

A handwritten signature in blue ink, consisting of a large loop followed by a series of connected strokes, is written over the signature line.

Date: **06-06-2016**

**Self-Monitoring Report
LLNL ISB01 (ISB01)
AREA TFD-HPD**

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 638

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1650	863	0.0
W-1653	267	0.0
W-1655	0	0.0
W-1657	0	0.0
Total:	<u>1,130</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>ISB01 injection well</u>	<u>W-1552</u>	<u>1,130</u>

6. Comments:

Compliance sampling is not required at this facility due to the fact that ISB01 is a closed loop system, and water is not discharged to the environment. Water was circulated through the system but was not treated. Approximately 100 gallons of facility water were added to the pre-mixing tote on 06-13-16 , 225 gallons were added on 06-27-16 for a total of 325 gallons. Ethyl Lactate injection took place on 06-14-16 and 06-27-16. The facility was down for approximately 83 hrs. for a variety of reasons: Ethyl Lactate injection and filling the pre-mixing tote with facility water and maintenance.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL ISB01 (ISB01)
AREA TFD-HPD

Operator Signature:  _____ Date: **07-05-2016**

Self-Monitoring Report
LLNL Portable Treatment Unit 2 (PTU2)
AREA TFD-S

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **672**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-07-2016**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **22.4**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	314,302	7.4
W-1504	251,224	6.3
W-1510	66,373	1.7
W-2601	74,774	1.9
Total:	<u>706,673</u>	<u>17.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>706,673</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **05-05-2016**

Self-Monitoring Report
LLNL Portable Treatment Unit 2 (PTU2)
AREA TFD-S

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	<u>29</u>	<u>30</u>																													
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 792

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>05-04-2016</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>21.3</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	348,386	7.4
W-1504	293,216	6.2
W-1510	63,656	1.5
W-2601	131,865	2.0
Total:	<u>837,123</u>	<u>17.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>837,123</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 06-06-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 2 (PTU2)
AREA TFD-S

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

Total monthly time facility operated (hours): 720

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-14-2016</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>21.1</u>

4. Wellfield Data:


<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	322,407	7.2
W-1504	269,166	6.2
W-1510	52,624	1.2
W-2601	131,251	2.9
Total:	<u>775,448</u>	<u>17.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>775,448</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-05-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 11 (PTU11)
AREA TFD-SE

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): **696**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-07-2016**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **19.7**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	158,071	3.9
W-2005	37,646	0.9
W-1308	39,087	0.9
W-1904	0	0.0
SIP-ETC-201	0	0.0
W-1403	40,045	1.0
Total:	<u>274,849</u>	<u>6.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>274,849</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **05-02-2016**

Operator Signature: hxx Date: 06-01-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 11 (PTU11)
AREA TFD-SE

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 720

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **06-01-2016**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **19.3**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	155,486	3.6
W-2005	36,640	0.8
W-1308	37,576	0.9
W-1403	40,816	0.9
W-1904	0	0.0
SIP-ETC-201	0	0.0
Total:	<u>270,518</u>	<u>6.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>270,518</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **07-01-2016**

Self-Monitoring Report
LLNL Portable Treatment Unit 12 (PTU12)
AREA TFD-SS

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 557

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 04-07-2016
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 20.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	152,111	4.5
W-1601	26,608	0.8
W-1602	62,792	1.9
W-1603	273,416	7.8
Total:	<u>514,927</u>	<u>14.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>514,927</u>

6. Comments:

Facility was shutdown at 14:46 on 04-11-2016 to repair a leak at discharge pump. Facility was restarted at 15:30 on 04-13-2016. Facility shutdown at 16:03 on 04-14-2016 due to Discharge (LTH- Interlock Broken). Facility was restarted at 9:39 on 04-18-2016. Facility was shutdown at 08:21 on 04-27-2016 to allow EE support time to verify air stripper DPT . Facility was restarted at 09:37 on 04-27-2016.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty Kline Date: 05-05-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 12 (PTU12)
AREA TFD-SS

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	<u>30</u>														
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>			

Total monthly time facility operated (hours): 672

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>05-04-2016</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>19.9</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	184,849	4.5
W-1601	30,693	0.8
W-1602	71,142	1.9
W-1603	301,603	7.6
Total:	<u>588,287</u>	<u>14.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>588,287</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy Kild Date: 06-08-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 12 (PTU12)
AREA TFD-SS

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

May	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															
June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>				
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>				

Total monthly time facility operated (hours): 816

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-07-2016</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>20.4</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	227,182	4.6
W-1601	37,462	0.8
W-1602	87,438	1.8
W-1603	405,906	7.2
Total:	<u>757,988</u>	<u>14.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>757,988</u>

6. Comments:
NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy Rata Date: 07-07-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 6 (PTU6)
AREA TFD-W

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): 704

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-05-2016**
Influent pH: **7.5**
Effluent pH: **7.5**
Effluent Temperature (°C): **21**

4. Wellfield Data:

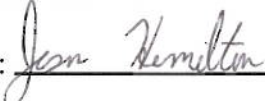
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1215	419,077	10.0
W-1216	417,753	10.0
W-1902	617,346	14.9
Total:	<u>1,454,176</u>	<u>34.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,454,176</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **05-02-2016**

Operator Signature: J. Hamilton Date: **06-08-2016**

Self-Monitoring Report
LLNL Portable Treatment Unit 6 (PTU6)
AREA TFD-W

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	12	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	19	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

Total monthly time facility operated (hours): 555

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-02-2016</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>22.9</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1215	327,813	9.8
W-1216	307,040	9.6
W-1902	479,554	14.7
Total:	<u>1,114,407</u>	<u>34.1</u>

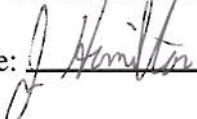
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,114,407</u>

6. Comments:

Facility was shutdown on 06-11-2016. Facility was restarted on 06-13-2016.
Facility was shutdown on 06-18-2016. Facility was restarted on 06-20-2016.
Facility was shutdown on 06-20-2016. Facility was restarted on 06-21-2016.
Facility was shutdown on 06-21-2016. Facility was restarted on 06-22-2016.
Facility was shutdown on 06-27-2016. Facility was restarted on 06-28-2016.
Facility was shutdown on 06-29-2016. Facility was restarted on 06-30-2016.
Facility was shutdown on 06-30-2016. Facility was restarted on 06-30-2016.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-11-2016

Self-Monitoring Report

LLNL Vapor Extraction System 11 (VES11)

AREA VTFD-ETCS

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1904	0	0.0	0	0	0
W-ETC-2003	580,206	13.9	-.97	60	702
W-ETC-2004A	361,787	8.7	-7.43	60	702
W-ETC-2004B	743,736	18.1	-3.68	60	702
SIP-ETC-201	0	0.0	0	0	0
Total:	<u>1,685,729</u>	<u>40.8</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 05-03-2016

Self-Monitoring Report

LLNL Vapor Extraction System 11 (VES11)

AREA VTFD-ETCS

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April	<u>30</u>																				
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>						
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>					

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1904	0	0.0	0	0	0
W-ETC-2003	474,445	7.5	-.47	56	775
W-ETC-2004A	151,422	1.8	-2.11	56	775
W-ETC-2004B	570,737	0.0	-1.33	56	775
SIP-ETC-201	0	0.0	0	0	0
Total:	<u>1,196,604</u>	<u>9.3</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **06-03-2016**

Self-Monitoring Report

LLNL Vapor Extraction System 11 (VES11)

AREA VTFD-ETCS

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treatment facility operated

June 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1904	0	0.0	0	0	0
W-ETC-2003	317,209	7.1	-.49	58	727
W-ETC-2004A	63,243	1.4	-2.03	58	727
W-ETC-2004B	382,678	9.0	-1.25	58	727
SIP-ETC-201	0	0.0	0	0	0
Total:	<u>763,130</u>	<u>17.5</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-05-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 3 (PTU3)
AREA TFE-E

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **682**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-05-2016**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **18.9**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	311,855	7.7
W-1109	40,940	1.0
W-1903	7,125	0.2
W-1909	0	0.0
W-2305	21	0.0
Total:	<u>359,941</u>	<u>8.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>359,941</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **05-03-2016**

Self-Monitoring Report
LLNL Portable Treatment Unit 3 (PTU3)
AREA TFE-E

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	<u>29</u>	<u>30</u>																													
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 799

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>05-03-2016</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>20.5</u>

4. Wellfield Data:

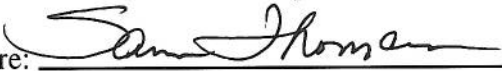
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	366,388	7.8
W-1109	45,613	1.1
W-1903	7,498	0.3
W-1909	0	0.0
W-2305	0	0.0
Total:	<u>419,499</u>	<u>9.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>419,499</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 06-06-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 3 (PTU3)
AREA TFE-E

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 732

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **06-01-2016**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **19.8**

4. Wellfield Data:


<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	334,729	7.7
W-1109	42,423	1.0
W-1903	5,734	0.1
W-1909	0	0.0
W-2305	0	0.0
Total:	<u>382,886</u>	<u>8.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>382,886</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **07-06-2016**

Self-Monitoring Report
LLNL GAC Treatment Unit 07 (GTU07)
AREA TFE-HS

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 570

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 04-01-2016
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 18.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2105	740	0.3
W-2801	28,242	0.7
Total:	<u>28,982</u>	<u>1.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>28,982</u>

6. Comments:

Facility was shut down for approximately 100 hours to clean the flow tube on W-2801 and to preform SOP 3.2 on W-2801 and W-2105

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 05-05-2016

Self-Monitoring Report
LLNL GAC Treatment Unit 07 (GTU07)
AREA TFE-HS

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	<u>29</u>	30																					
May	01	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>								
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>							

Total monthly time facility operated (hours): 730

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>05-13-2016</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>18.6</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2105	434	0.1
W-2801	35,135	6.3
Total:	<u>35,569</u>	<u>6.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>35,569</u>

6. Comments:

Facility was shut down in support of electrical maintenance On 4/29/16 and
Restarted on 5/2/16

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-29-2016

Self-Monitoring Report
LLNL GAC Treatment Unit 07 (GTU07)
AREA TFE-HS

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

Total monthly time facility operated (hours): 727

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-14-2016</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>24.9</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2105	195	0.7
W-2801	32,415	0.2
Total:	<u>32,610</u>	<u>1.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>32,610</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-11-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 9 (PTU9)
AREA TFE-NW

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): 706

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 04-07-2016
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 20.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	285,683	6.5
W-1409	66,448	1.6
Total:	<u>352,131</u>	<u>8.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>352,131</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty Hill Date: 05-05-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 9 (PTU9)
AREA TFE-NW

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	<u>30</u>														
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>			

Total monthly time facility operated (hours): 681

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>05-04-2016</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>20.5</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	280,992	7.0
W-1409	63,654	1.6
Total:	<u>344,646</u>	<u>8.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>344,646</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Bill G. Kille Date: 06-08-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 9 (PTU9)
AREA TFE-NW

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

May	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															
June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>				
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>				

Total monthly time facility operated (hours): 828

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-07-2016</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>20.7</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	338,063	6.9
W-1409	77,705	1.6
Total:	<u>415,768</u>	<u>8.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>415,768</u>

6. Comments:
NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy L. L. L. Date: 07-07-2016

Self-Monitoring Report
LLNL Mini Treatment Unit 04 (MTU04)
AREA TFE-SE

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 653

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 04-05-2016
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 21.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	334,198	8.5
Total:	<u>334,198</u>	<u>8.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>334,198</u>

6. Comments:

Facility was shutdown on 04-05-2016 to replace stripper float switch. Facility was restarted on 04-06-201 at 09:03.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 05-03-2016

Self-Monitoring Report
LLNL Mini Treatment Unit 04 (MTU04)
AREA TFE-SE

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	<u>29</u>	<u>30</u>														
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	11	12	13	14	15	
	16	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>

Total monthly time facility operated (hours): 625

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>05-03-2016</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>22</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	323,498	8.5
Total:	<u>323,498</u>	<u>8.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>323,498</u>

6. Comments:

Facility was shutdown on 05-05-2016 to conduct system interlock checks.
Facility was restarted on 05-05-2016. Facility was shutdown on 05-10-2016 to perform SOP 3.2 at W-359. Facility was restarted on 05-17-2016.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 06-06-2016

Self-Monitoring Report
LLNL Mini Treatment Unit 04 (MTU04)
AREA TFE-SE

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 720

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 06-02-2016
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 21.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	372,379	8.6
Total:	<u>372,379</u>	<u>8.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>372,379</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-05-2016

Self-Monitoring Report
LLNL Mini Treatment Unit 03 (MTU03)
AREA TFE-SW

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **672**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-01-2016**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **19.4**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1516	410,672	10.2
W-1518	0	0.0
W-1520	27,786	0.7
W-1522	21,214	0.6
Total:	<u>459,672</u>	<u>11.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>459,672</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **05-05-2016**

Self-Monitoring Report
LLNL Mini Treatment Unit 03 (MTU03)
AREA TFE-SW

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	<u>29</u>	30																												
May	01	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>															
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>														

Total monthly time facility operated (hours): 714

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>05-04-2016</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>22.2</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1516	435,403	10.0
W-1518	0	0.0
W-1520	20,594	0.7
W-1522	20,779	0.6
Total:	<u>476,776</u>	<u>11.3</u>

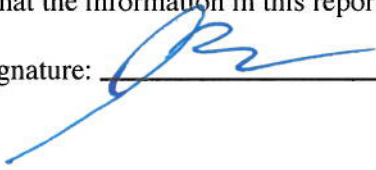
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>476,776</u>

6. Comments:

Facility was shutdown on 04-29-2016 to prepare for a power outage in the area.
Facility was restarted on 05-02-2016.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 06-06-2016

Self-Monitoring Report
LLNL Mini Treatment Unit 03 (MTU03)
AREA TFE-SW

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

Total monthly time facility operated (hours): 720

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-14-2016</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>22.4</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1516	446,200	10.3
W-1518	0	0.0
W-1520	30,191	0.7
W-1522	23,461	0.4
Total:	<u>499,852</u>	<u>11.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>499,852</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-05-2016

Self-Monitoring Report
LLNL Mini Treatment Unit 05 (MTU05)
AREA TFE-W

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **672**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-05-2016**
Influent pH: **7.5**
Effluent pH: **7.5**
Effluent Temperature (°C): **20.5**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-292	243,935	6.0
W-305	476,150	12.0
Total:	<u>720,085</u>	<u>18.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>720,085</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Sam Thomas* Date: **05-03-2016**

Self-Monitoring Report
LLNL Mini Treatment Unit 05 (MTU05)
AREA TFE-W

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	<u>29</u>	<u>30</u>																													
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>															

Total monthly time facility operated (hours): 791

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>05-03-2016</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>21.9</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-292	287,029	6.0
W-305	570,549	12.0
Total:	<u>857,578</u>	<u>18.1</u>


5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>857,578</u>

6. Comments:

Facility was shutdown on 05-26-2016 at 08:34 conduct system interlock checks and strategy download. Facility was restarted on 05-26-2016 at 10:47.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 06-07-2016

Self-Monitoring Report
LLNL Mini Treatment Unit 05 (MTU05)
AREA TFE-W

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June	<u>01</u>	<u>02</u>	03	04	05	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

Total monthly time facility operated (hours): 630

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-02-2016</u>
Influent pH:	<u>7.0</u>
Effluent pH:	<u>7.0</u>
Effluent Temperature (°C):	<u>22.2</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-292	224,542	6.0
W-305	427,641	12.5
Total:	<u>652,183</u>	<u>18.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>652,183</u>

6. Comments:

Facility was shutdown on 06-02-2016 at 11:30 to troubleshoot system. Facility was restarted on 06-02-2016 at 13:11. Facility was shutdown 6-2-16 at 16:10 due to leak on W-292 discharge pipe. Facility was restarted 6-6-16. W-305 shutdown several times during reporting month. Investigation on the root cause of these interruptions is ongoing.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Roman Date: 07-11-2016

Self-Monitoring Report

LLNL Vapor Extraction System 16 (VES16)

AREA VTFE-ELM

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1903	137,540	3.2	-23.73	67	670
W-1909	0	0.0	0	0	0
W-2305	5,618	0.2	-3.16	67	670
W-543-001	12	0.0	0	0	0
W-543-1908	12	0.0	0	0	0
W-543-003	40,784	1.3	-.03	67	670
Total:	<u>183,966</u>	<u>4.7</u>			

4. Comments:

Facility was shutdown on 04-13-2016 at 02:40 due to high discharge separator level. Facility was restarted on 04-13-2016 at 08:30. Quarterly vapor samples collected from idle and operating extraction wells 4-25-16.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 05-04-2016

Self-Monitoring Report

LLNL Vapor Extraction System 16 (VES16)

AREA VTFE-ELM

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April	<u>29</u>	<u>30</u>																								
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>											
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>										


3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1903	151,876	3.1	-23.3	67	787
W-1909	0	0.0	0	0	0
W-2305	5,739	0.0	-2.85	67	787
W-543-001	0	0.0	0	0	0
W-543-003	49,076	1.3	-.03	67	787
W-543-1908	0	0.0	0	0	0
Total:					
	<u>206,691</u>	<u>4.5</u>			

4. Comments:

Facility was shutdown on 05-03-2016 at 09:48 to troubleshoot communication problem at PTU 3. Facility was restarted on 05-03-2016 at 10:25

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 06-06-2016

Self-Monitoring Report

LLNL Vapor Extraction System 16 (VES16)

AREA VTFF-ELM

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treatment facility operated

June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>


3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1903	143,722	3.3	-23.06	68	719
W-1909	0	0.0	0	0	0
W-2305	5,249	0.0	-6.84	0	632
W-543-001	0	0.0	0	0	0
W-543-003	44,528	0.7	-.01	0	719
W-543-1908	0	0.0	0	0	0
Total:	<u>193,499</u>	<u>4.0</u>			

4. Comments:

Facility was shutdown on 06-08-2016 at 13:02 to install solenoid valves on facility and wellfield flow and pressure transmitters. Facility was restarted on 06-08-2016 at 14:30. W-2305 secured 6-27-16.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-07-2016

Self-Monitoring Report

LLNL Vapor Extraction System 12 (VES12)

AREA VTFF-HS

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2105	78,528	1.3	-10.96	59	604
W-ETS-2008A	0	0.0	0	0	0
W-ETS-2008B	338,401	8.7	-9.73	59	604
W-ETS-2009	0	0.0	0	0	0
W-ETS-2010A	0	0.0	0	0	0
W-ETS-2010B	0	0.0	0	0	0
Total:	<u>416,929</u>	<u>10.0</u>			

4. Comments:

Facility was shutdown on 04-16-2016 due to low water. Facility was restarted on 04-18-2016.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-25-2016

Self-Monitoring Report

LLNL Vapor Extraction System 12 (VES12)

AREA VTFE-HS

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April	<u>29</u>	30																													
May	01	02	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>																
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	29	30	<u>31</u>															

3. Wellfield Data:

Source	Monthly Volume(cu. ft)	Instantaneous Flow Rate(scfm)	P(in. Hg)	T(°F)	Hours of Op.
W-2105	46,051	1.7	-11.24	80	523
W-ETS-2008A	0	0.0	0	0	0
W-ETS-2008B	346,591	9.9	-6.39	80	523
W-ETS-2009	0	0.0	0	0	0
W-ETS-2010A	0	0.0	0	0	0
W-ETS-2010B	0	0.0	0	0	0
Total:	<u>392,642</u>	<u>11.7</u>			

4. Comments:

Facility was shutdown on 04-29-2016 in preparation of a power outage. Facility was restarted on 05-03-2016. Facility was shutdown on 05-28-2016 due to low water. Facility was restarted on 05-31-2016.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 08-22-2016

Self-Monitoring Report

LLNL Vapor Extraction System 12 (VES12)

AREA VTFE-HS

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treatment facility operated

June	<u>01</u>	<u>02</u>	<u>03</u>	04	05	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	12	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	19	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	25	26	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2105	23,222	0.5	-6.67	60	438
W-ETS-2008A	0	0.0	0	0	0
W-ETS-2008B	207,448	7.2	-4.76	60	438
W-ETS-2009	0	0.0	0	0	0
W-ETS-2010A	0	0.0	0	0	0
W-ETS-2010B	0	0.0	0	0	0
Total:	<u>230,670</u>	<u>7.7</u>			

4. Comments:

Facility was shutdown on 06-03-2016 due to low water. Facility was restarted on 06-06-2016. Facility was shutdown on 06-11-2016 due to low water. Facility was restarted on 06-13-2016. Facility was shutdown on 06-18-2016 due to low water. Facility was restarted on 06-20-2016. Facility was shutdown on 06-24-2016 due to low water. Facility was restarted on 06-27-2016.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-06-2016

Self-Monitoring Report
LLNL GAC Treatment Unit 01 (GTU01)
AREA TFG-1

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): **696**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-05-2016**
Influent pH: **7.5**
Effluent pH: **7.5**
Effluent Temperature (°C): **18.3**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	<u>84,271</u>	<u>2.0</u>
Total:	<u>84,271</u>	<u>2.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>84,271</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: *Jason Hamilton* Date: **05-02-2016**

Land Observation Report date:
TFG-ASW - Arroyo Seco

1. Reporting Period: Business Month April Year 2016

2. Date compliance sampling performed 04-05-2016

3. Weather Conditions:

Average air tempertaure (°C):	<u>13.55</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>4/ SSW</u>

4. Receiving Data:

Sample Location	pH	Temperature (C)
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 05-02-2016

Operator Signature: [Signature] Date: **06-01-2016**

**Land Observation Report date:
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month May Year 2016

2. Date compliance sampling performed 05-31-2016

3. Weather Conditions:

Average air tempertaure (°C):	<u>19.76</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>5/ SSW</u>

4. Receiving Data:

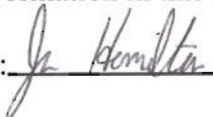
<u>Sample</u> <u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>7.5</u>	<u>17.8</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:
N/A

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-27-2016

Self-Monitoring Report
LLNL GAC Treatment Unit 01 (GTU01)
AREA TFG-1

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

Total monthly time facility operated (hours): 720

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y):	<u>06-02-2016</u>
Influent pH:	<u>7.5</u>
Effluent pH:	<u>7.5</u>
Effluent Temperature (°C):	<u>20.1</u>

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	87,821	2.0
Total:	<u>87,821</u>	<u>2.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>87,821</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Joe Hamilton Date: 07-08-2016

**Land Observation Report date:
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month June Year 2016

2. Date compliance sampling performed 06-02-2016

3. Weather Conditions:

Average air tempertaure (°C):	<u>21.94</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>4/ SSW</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>7.5</u>	<u>20.1</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: J. Hamilton Date: 07-27-2016

Self-Monitoring Report
LLNL Mini Treatment Unit 02 (MTU02)
AREA TFG-N

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 703

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 04-05-2016
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 20.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1806	0	0.0
W-1807	166,603	4.0
Total:	<u>166,603</u>	<u>4.0</u>


5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>166,603</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: José Hamilton Date: 05-02-2016

Operator Signature:  Date: **06-08-2016**

Self-Monitoring Report
LLNL Mini Treatment Unit 02 (MTU02)
AREA TFG-N

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 556

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 06-02-2016
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 20.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1806	0	0.0
W-1807	132,193	3.9
Total:	<u>132,193</u>	<u>3.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>132,193</u>

6. Comments:

Facility was shutdown on 06-23-2016 for REVAL.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Jan Hamilton Date: 07-07-2016

Self-Monitoring Report
LLNL Portable Treatment Unit 5 (PTU5)
AREA TF406

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** 03 04 **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): **647**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-07-2016**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **21.4**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	84	0.0
W-1310	333,877	8.9
Total:	<u>333,961</u>	<u>8.9</u>


5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>333,961</u>

6. Comments:

Facility shutdown 4/3 due to CPU failure. CPU replaced and facility restarted on 4/5

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **05-03-2016**

Operator Signature: [Signature] Date: **06-01-2016**

Self-Monitoring Report
LLNL Portable Treatment Unit 5 (PTU5)
AREA TF406

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 727

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 06-02-2016
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 20.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	0	0.0
W-1310	369,260	8.6
Total:	<u>369,260</u>	<u>8.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>369,260</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-01-2016

Self-Monitoring Report
LLNL GAC Treatment Unit 03 (GTU03)
AREA TF406-NW

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 693

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 04-05-2016
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 20.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1801	235,196	5.6
Total:	<u>235,196</u>	<u>5.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>235,196</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Joan Hamilton Date: 05-02-2016

Operator Signature: [Signature] Date: **06-01-2016**

Self-Monitoring Report
LLNL GAC Treatment Unit 03 (GTU03)
AREA TF406-NW

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): **697**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **06-02-2016**
Influent pH: **7.5**
Effluent pH: **7.5**
Effluent Temperature (°C): **20.1**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1801	231,070	5.6
Total:	<u>231,070</u>	<u>5.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>231,070</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **07-07-2016**

Self-Monitoring Report
LLNL Solar Treatment Unit 09 (STU09)
AREA TF518-N

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

March	31														
April	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28		

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 05-03-2016

Self-Monitoring Report
LLNL Solar Treatment Unit 09 (STU09)
AREA TF518-N

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	29	30																	
May	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15				
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kargan Date: 06-02-2016

Self-Monitoring Report
LLNL Solar Treatment Unit 09 (STU09)
AREA TF518-N

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

May	31														
June	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve I. Gargano Date: 07-01-2016

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 1 (CRD1)
AREA TF5475-1

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **Not Measured**

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty L. L. L. Date: **05-05-2016**

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 1 (CRD1)
AREA TF5475-1

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	30																
May	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15		
	16	17	18	19	20	21	22	23	24	25	26	27					

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 06-08-2016

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 1 (CRD1)
AREA TF5475-1

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

May	28	29	30	31											
June	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty Hulin Date: 07-07-2016

Self-Monitoring Report
LLNL GAC Treatment Unit 09 (GTU09)
AREA TF5475-2

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): **706**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **04-07-2016**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **19.9**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	47,854	1.2
W-1415	0	0.0
Total:	<u>47,854</u>	<u>1.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>47,854</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **05-02-2016**

Operator Signature: _____ Date: 06-01-2016

Self-Monitoring Report
LLNL GAC Treatment Unit 09 (GTU09)
AREA TF5475-2

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

June 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 730

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 06-01-2016
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 18.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	45,803	1.2
W-1415	0	0.0
Total:	<u>45,803</u>	<u>1.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>45,803</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-01-2016

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 2 (CRD2)
AREA TF5475-3

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1604	0	0.0
W-1605	0	0.0
W-1608	0	0.0
W-1609	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty Kull Date: 05-05-2016

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 2 (CRD2)
AREA TF5475-3

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

April	30														
May	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27			

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1604	0	0.0
W-1605	0	0.0
W-1608	0	0.0
W-1609	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Bell Date: 06-08-2016

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 2 (CRD2)
AREA TF5475-3

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treated ground water was discharged

May	28	29	30	31															
June	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15				
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1604	0	0.0
W-1605	0	0.0
W-1608	0	0.0
W-1609	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty K. R. R. Date: 07-07-2016

Self-Monitoring Report

LLNL Vapor Extraction System 08 (VES08)

AREA VTF406-HS

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-217	488,731	11.7	-2.14	72	696
W-514-2007A	0	0.0	0	0	0
W-514-2007B	336,099	8.4	-2.33	72	696
Total:	<u>824,830</u>	<u>20.1</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Jan Hamilton Date: 05-06-2016

Self-Monitoring Report

LLNL Vapor Extraction System 08 (VES08)

AREA VTF406-HS

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April	<u>30</u>																				
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>						
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>					

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-217	535,413	8.7	-2.28	70	768
W-514-2007A	0	0.0	0	0	0
W-514-2007B	396,186	11.8	-2.06	70	768
Total:	<u>931,599</u>	<u>20.5</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 06-13-2016

Self-Monitoring Report

LLNL Vapor Extraction System 08 (VES08)

AREA VTF406-HS

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treatment facility operated

June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-217	534,044	12.6	-1.77	68	723
W-514-2007A	0	0.0	0	0	0
W-514-2007B	352,363	7.8	-2.03	68	723
Total:	<u>886,407</u>	<u>20.4</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Jan Hamilton Date: 07-08-2016

Self-Monitoring Report

LLNL Vapor Extraction System 05 (VES05)

AREA VTF511

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28

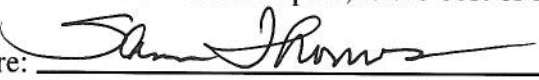
3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2204	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	11	0.0	0	0	0
W-2207B	610,902	15.1	-8.4	70	668
W-2208A	23	0.0	0	0	0
W-2208B	595,860	15.4	-7.7	70	668
Total:	<u>1,206,796</u>	<u>30.5</u>			

4. Comments:

Quarterly vapor samples collected from W-2207A, W-2207B, W-2208A and W-2208B 4-25-16.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 05-04-2016

Self-Monitoring Report

LLNL Vapor Extraction System 05 (VES05)

AREA VTF511

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treatment facility operated

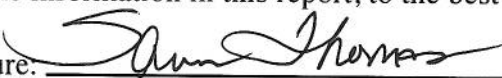
April	<u>29</u>	<u>30</u>																				
May	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>							
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>						

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2204	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	0	0.0	0	0	0
W-2207B	681,778	13.8	-8	64	793
W-2208A	0	0.0	0	0	0
W-2208B	859,156	18.4	-7.2	64	793
Total:	<u>1,540,934</u>	<u>32.2</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 06-06-2016

Self-Monitoring Report

LLNL Vapor Extraction System 05 (VES05)

AREA VTF511

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treatment facility operated

June	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2204	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	0	0.0	0	0	0
W-2207B	597,834	13.8	-8	72	720
W-2208A	0	0.0	0	0	0
W-2208B	805,920	18.4	-7.3	72	720
Total:	<u>1,403,754</u>	<u>32.2</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-06-2016

Self-Monitoring Report

LLNL Vapor Extraction System 13 (VES13)

AREA VTF518-PZ

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2215A	24,259	0.0	0	0	21
W-2215B	559,030	22.8	-20.5	90	405
Total:	<u>583,289</u>	<u>22.8</u>			

4. Comments:

VES 13 secured 4-21-16 to extend well casings in preparation for VTF518-PZ facility REVAL. Vapor samples collected from W-2215A and W-2215B 4-11-16.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 05-06-2016

Self-Monitoring Report

LLNL Vapor Extraction System 13 (VES13)

AREA VTF518-PZ

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April	30																									
May	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15											
	16	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>										

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2215A	354,187	17.6	-19.2	63	333
W-2215B	0	0.0	0	0	0
<hr/>					
Total:	<u>354,187</u>	<u>17.6</u>			

4. Comments:

Facility was restarted on 05-17-2016 at 10:30.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 06-07-2016

Self-Monitoring Report
LLNL Vapor Extraction System 13 (VES13)
AREA VTF518-PZ

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treatment facility operated

June	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2215A	0	0.0	0	0	0
W-2215B	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Comments:

The facility was secured on May 31 and did not operate this reporting month.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 07-06-2016

Self-Monitoring Report

LLNL Vapor Extraction System 19 (VES19)

AREA VTF518-PZ

1. Reporting Period: Business Month April Week: 1 Year 2016

2. Dates (in **bold** and underline) treatment facility operated

March **26** **27** **28** **29** **30** **31**
 April **01**


3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	37,374	3.7	-18	50	168
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	6,061	0.6	-20.7	50	168
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>43,435</u>	<u>4.3</u>			

4. Comments:

Vapor flow from W-518-1915 restricted by groundwater covering the screen.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 05-05-2016

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month April Week: 2 Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April **02** **03** **04** **05** **06** **07** **08**

3. Wellfield Data:

<u>Source</u>	<u>Weekly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1615	35,183	3.5	-19	52	168
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	0	0.0	-8	52	168
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>35,183</u>	<u>3.5</u>			

4. Comments:

Vapor flow from W-518-1915 restricted by groundwater covering the screen.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: **05-05-2016**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month April **Week: 3** Year **2016**

2. Dates (in **bold** and underline) treatment facility operated

April **09** **10** **11** **12** **13** **14** **15**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	35,958	3.6	-19	38	166
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	0	0.0	-8	38	166
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>35,958</u>	<u>3.6</u>			

4. Comments:

Vapor flow from W-518-1915 restricted by groundwater covering the screen.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: **05-05-2016**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month April **Week: 4** Year **2016**

2. Dates (in **bold** and underline) treatment facility operated

April **16** **17** **18** **19** **20** **21**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	31,172	3.5	-19	68	148
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	0	0.0	-3	68	148
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>31,172</u>	<u>3.5</u>			

4. Comments:

Vapor flow from W-518-1915 restricted by groundwater covering the screen.
VTF518-PZ operations secured 4-21-16 to begin construction on extraction wells
in affiliation with VTF518 REVAL.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **05-05-2016**

Self-Monitoring Report

LLNL Vapor Extraction System 19 (VES19)

AREA VTF518-PZ

1. Reporting Period: Business Month April Week: 5 Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April 22 23 24 25 26 27 28 29


3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	0	0.0	0	0	0
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Comments:

Facility did not operate this reporting week. VTF518-PZ operations secured 4-21-16 to begin construction on extraction wells in affiliation with VTF518 REVAL.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 06-06-2016

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month May Week: 1 Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April 30
May 01 02 03 04 05 06


3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	0	0.0	0	0	0
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Comments:

Facility did not operate this reporting week. VTF518-PZ operations secured 4-21-16 to begin construction on extraction wells in affiliation with VTF518 REVAL

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **06-06-2016**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month May **Week: 2** Year **2016**

2. Dates (in **bold** and underline) treatment facility operated

May 07 08 09 10 11 12 13

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	0	0.0	0	0	0
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	0	0.0	0	0	0
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Comments:

Facility did not operate this reporting week. VTF518-PZ operations secured 4-21-16 to begin construction on extraction wells in affiliation with VTF518 REVAL.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: **06-06-2016**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month May Week: **3** Year **2016**

2. Dates (in **bold** and underline) treatment facility operated

May 14 15 16 **17** **18** **19** **20**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	14,585	3.8	-17.5	58	64
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	2,303	0.6	-12	58	64
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>16,888</u>	<u>4.4</u>			

4. Comments:

Facility was restarted on 05-17-2016 at 10:35.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: **06-07-2016**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month May Week: **4** Year **2016**

2. Dates (in **bold** and underline) treatment facility operated

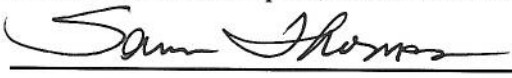
May **21** **22** **23** **24** **25** **26** **27**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	36,275	3.6	-18	59	168
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	5,038	0.5	-20	59	168
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>41,313</u>	<u>4.1</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **06-06-2016**

Self-Monitoring Report

LLNL Vapor Extraction System 19 (VES19)

AREA VTF518-PZ

1. Reporting Period: Business Month June Week: **1** Year **2016**

2. Dates (in **bold** and underline) treatment facility operated

May	<u>28</u>	<u>29</u>	<u>30</u>	<u>31</u>
June	<u>01</u>	<u>02</u>	<u>03</u>	

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	33,213	3.3	-19	68	168
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	5,032	0.5	-20	68	168
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>38,245</u>	<u>3.8</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 07-06-2016

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month June **Week: 2** Year **2016**

2. Dates (in **bold** and underline) treatment facility operated

June **04** **05** **06** **07** **08** **09** **10**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	33,345	3.3	-19.5	60	168
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	4,042	0.4	-21.5	60	168
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>37,387</u>	<u>3.7</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: **07-06-2016**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month June Week: **3** Year **2016**

2. Dates (in **bold** and underline) treatment facility operated

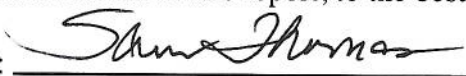
June **11** **12** **13** **14** **15** **16** **17**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	31,953	3.2	-19.5	53	166
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	3,994	0.4	-21.5	53	166
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>35,947</u>	<u>3.6</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **07-06-2016**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month June **Week: 4** Year **2016**

2. Dates (in **bold** and underline) treatment facility operated


June **18** **19** **20** **21** **22** **23** **24**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	31,611	3.1	-20	67	170
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	4,079	0.4	-21.5	67	170
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>35,690</u>	<u>3.5</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **07-06-2016**

Self-Monitoring Report
LLNL Vapor Extraction System 01 (VES01)
AREA VTF5475

1. Reporting Period: Business Month April Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1605	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
W-ETS-507	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty Kild Date: 05-05-2016

Self-Monitoring Report

LLNL Vapor Extraction System 01 (VES01)

AREA VTF5475

1. Reporting Period: Business Month May Year 2016

2. Dates (in **bold** and underline) treatment facility operated

April	30														
May	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27			

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1605	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
W-ETS-507	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
<hr/>					
Total:	<u>0</u>	<u>0.0</u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **06-08-2016**

Self-Monitoring Report

LLNL Vapor Extraction System 01 (VES01)

AREA VTF5475

1. Reporting Period: Business Month June Year 2016

2. Dates (in **bold** and underline) treatment facility operated

May	28	29	30	31												
June	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1605	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
W-ETS-507	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy Huth Date: 07-07-2016

Attachment C

Figures

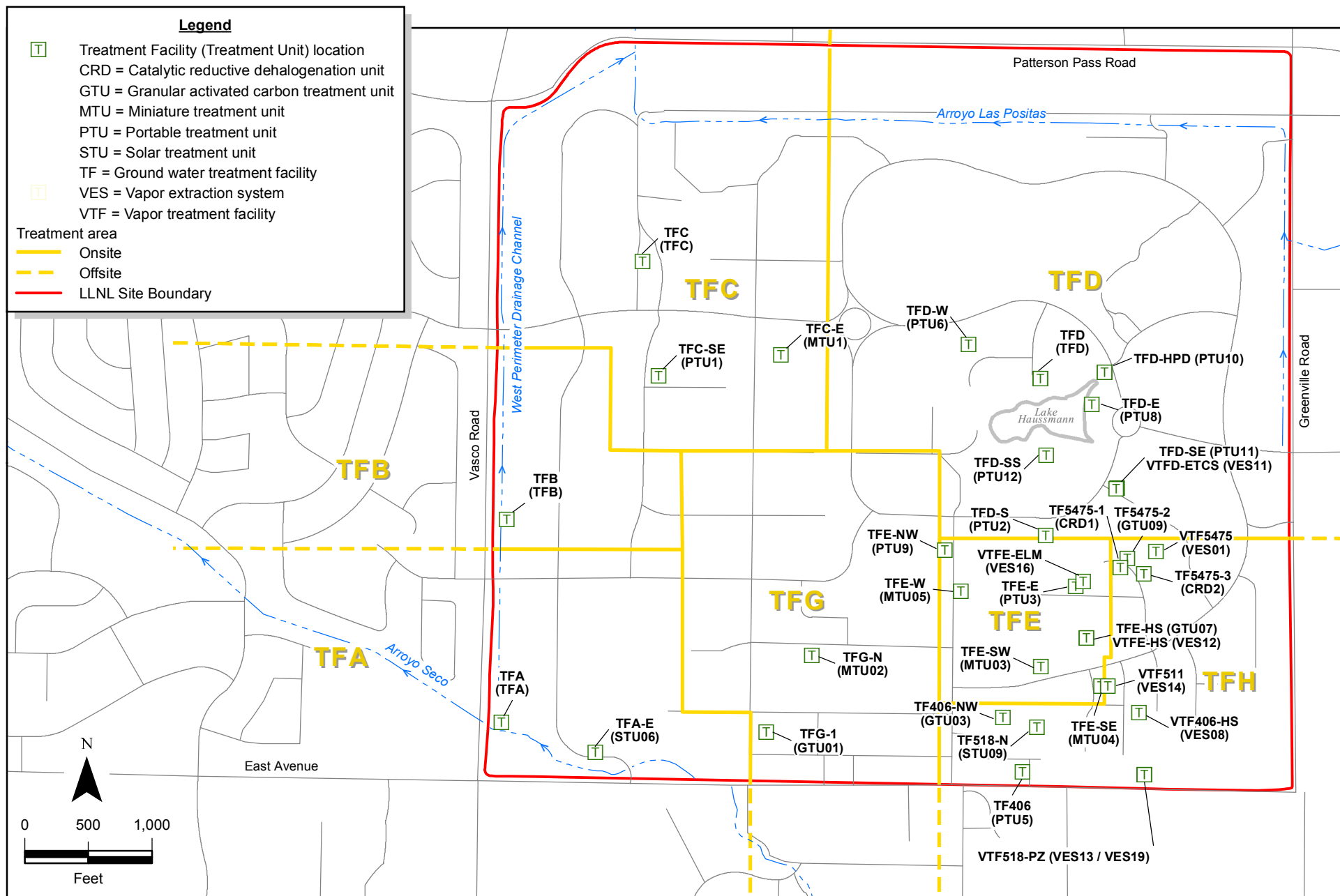


Figure 1. Livermore Site treatment areas and treatment facility locations.

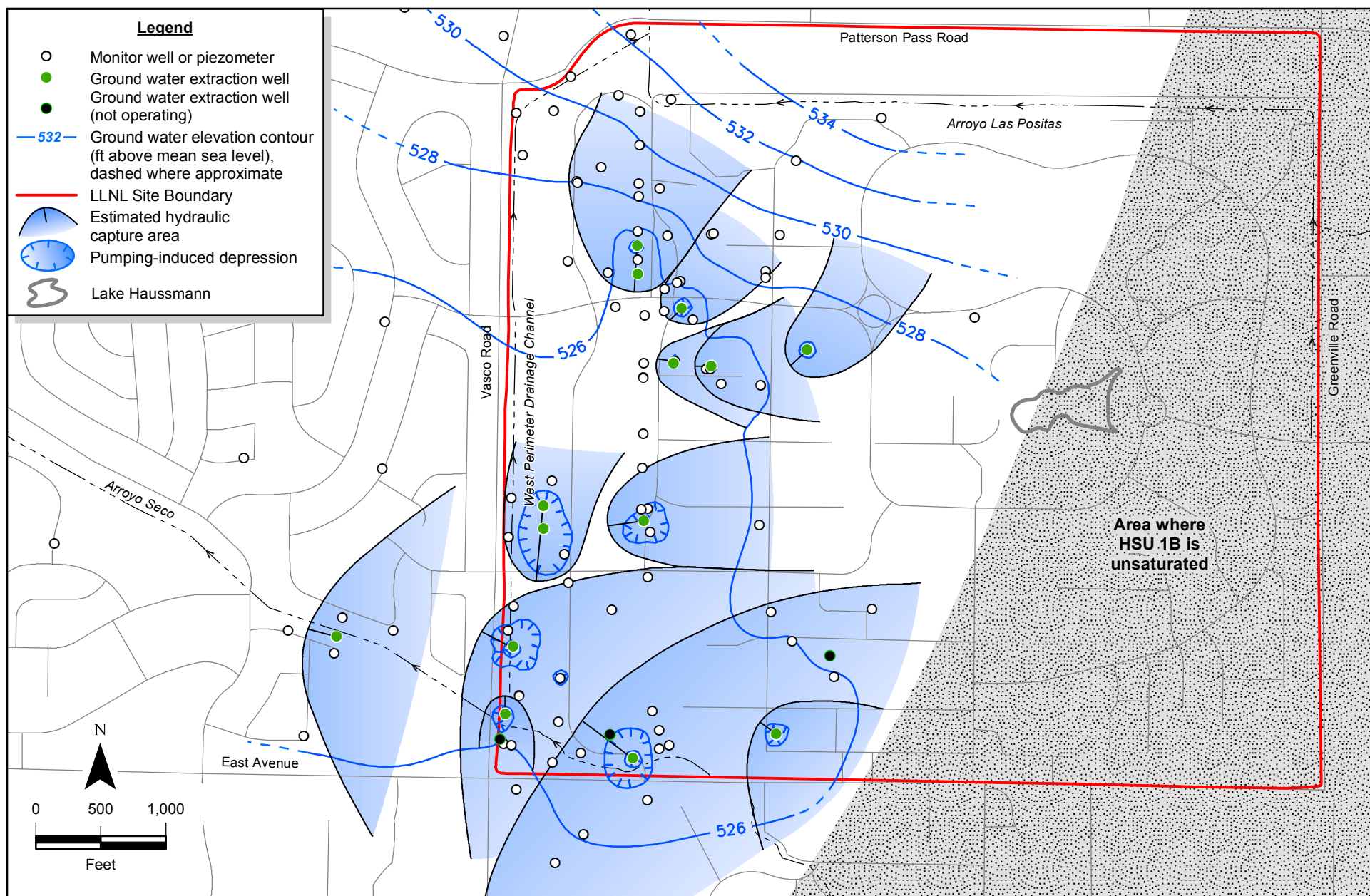


Figure 2. Ground water elevation contour map based on 105 wells completed within HSU-1B showing estimated hydraulic capture areas, LLNL and vicinity, second quarter 2016.

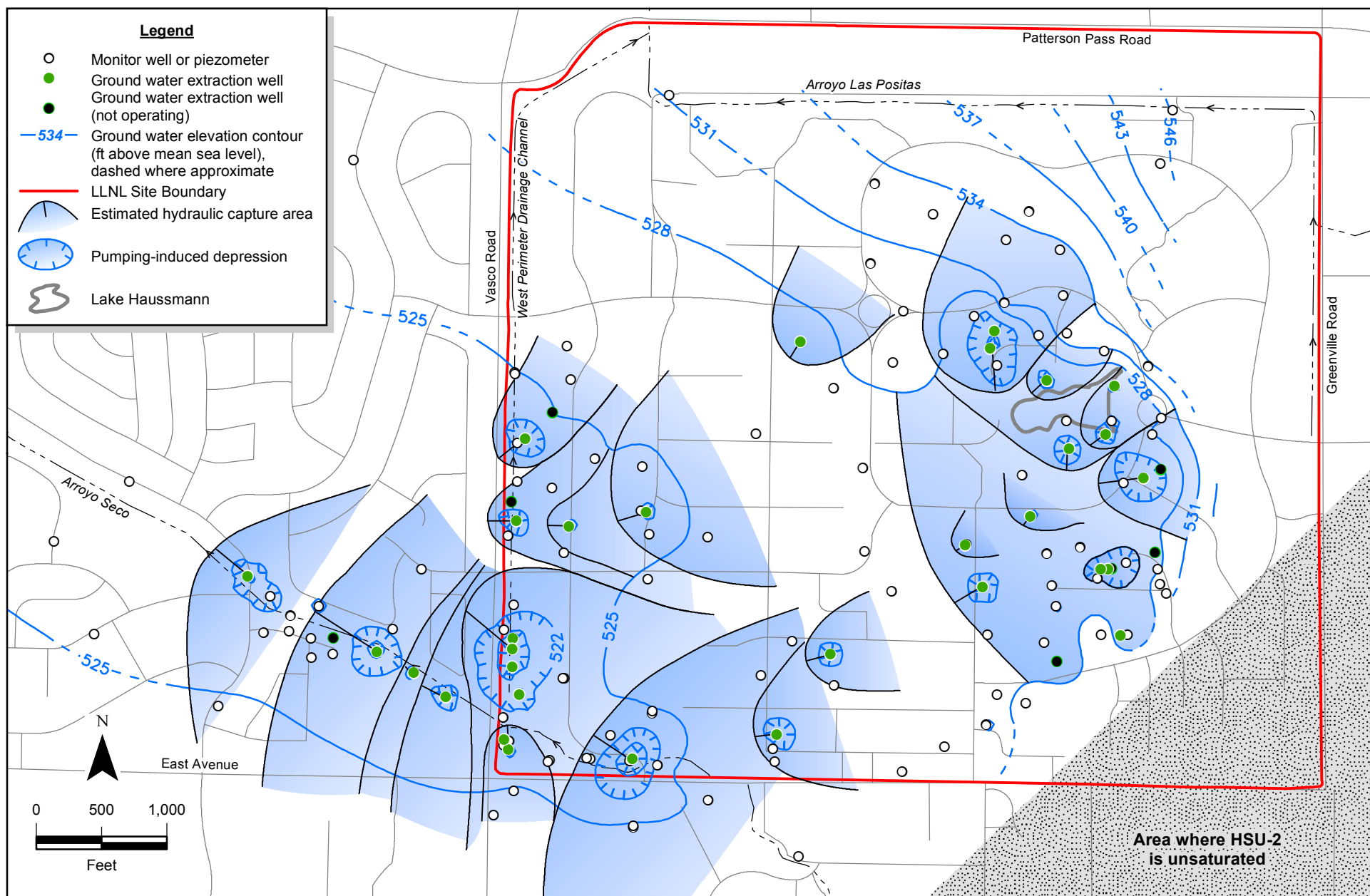


Figure 3. Ground water elevation contour map based on 146 wells completed within HSU-2 showing estimated hydraulic capture areas, LLNL and vicinity, second quarter 2016.

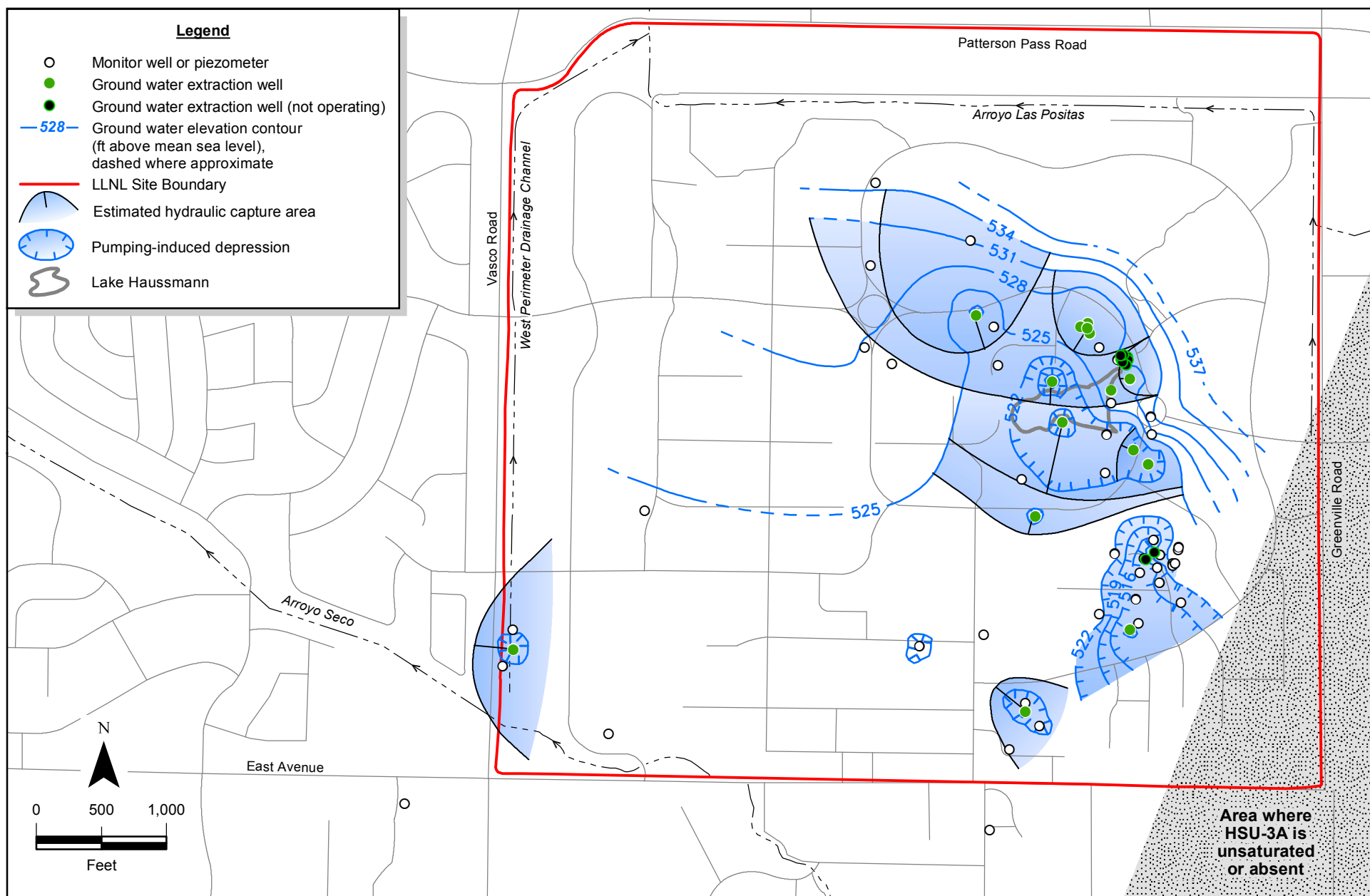


Figure 4. Ground water elevation contour map based on 68 wells completed within HSU-3A showing estimated hydraulic capture areas, LLNL and vicinity, second quarter 2016.

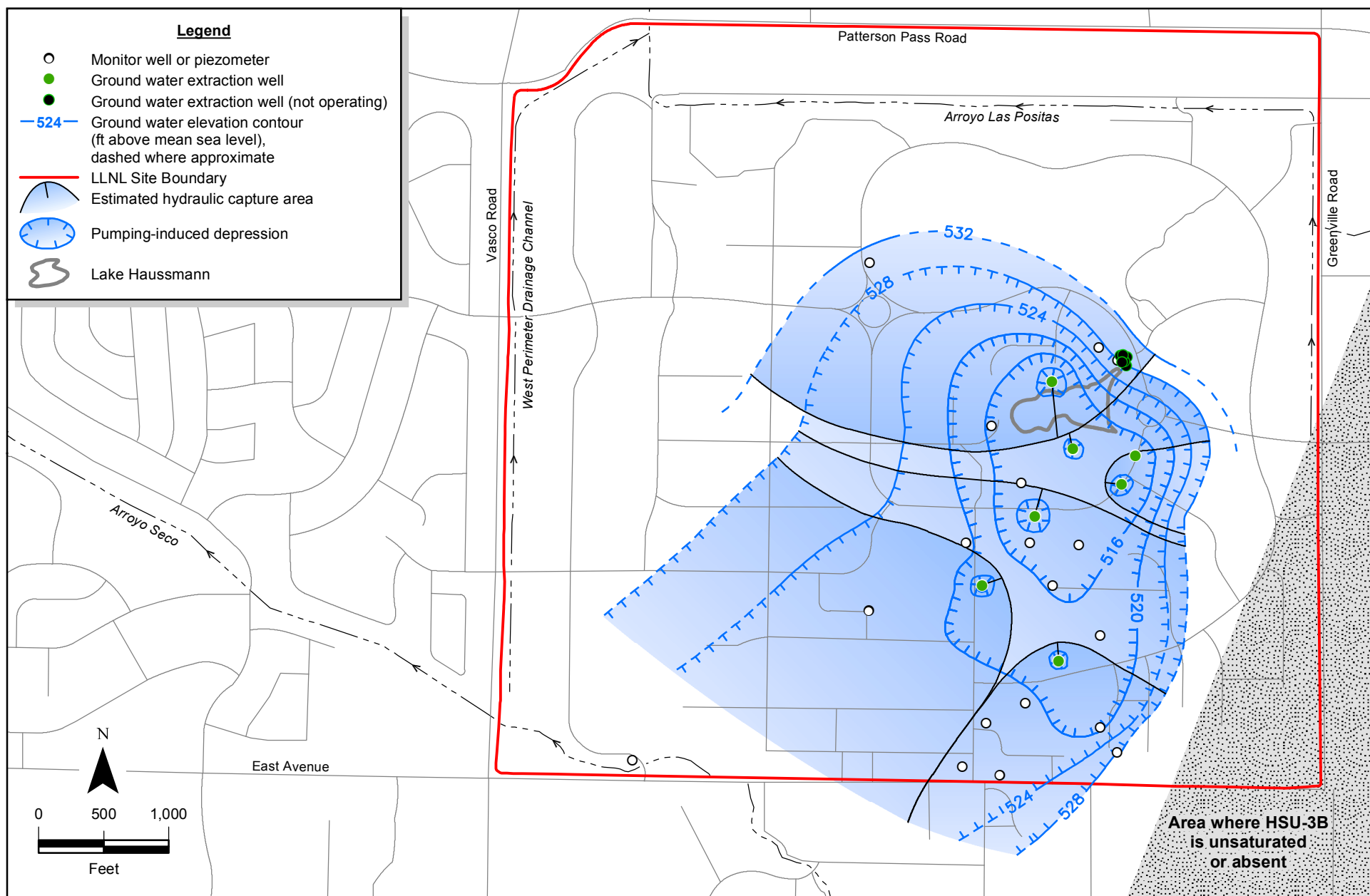


Figure 5. Ground water elevation contour map based on 31 wells completed within HSU-3B showing estimated hydraulic capture areas, LLNL and vicinity, second quarter 2016.

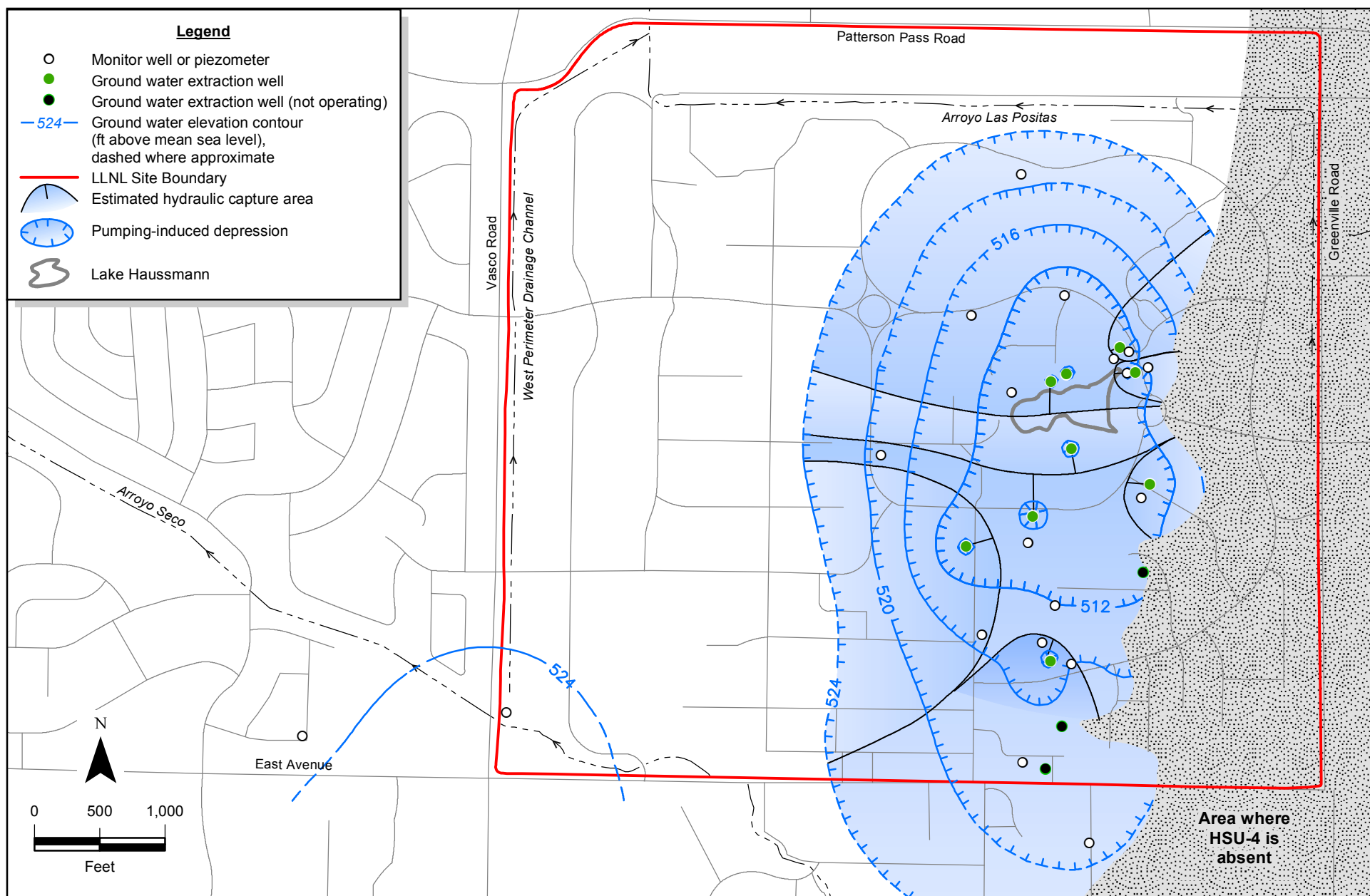


Figure 6. Ground water elevation contour map based on 31 wells completed within HSU-4 showing estimated hydraulic capture areas, LLNL and vicinity, second quarter 2016.

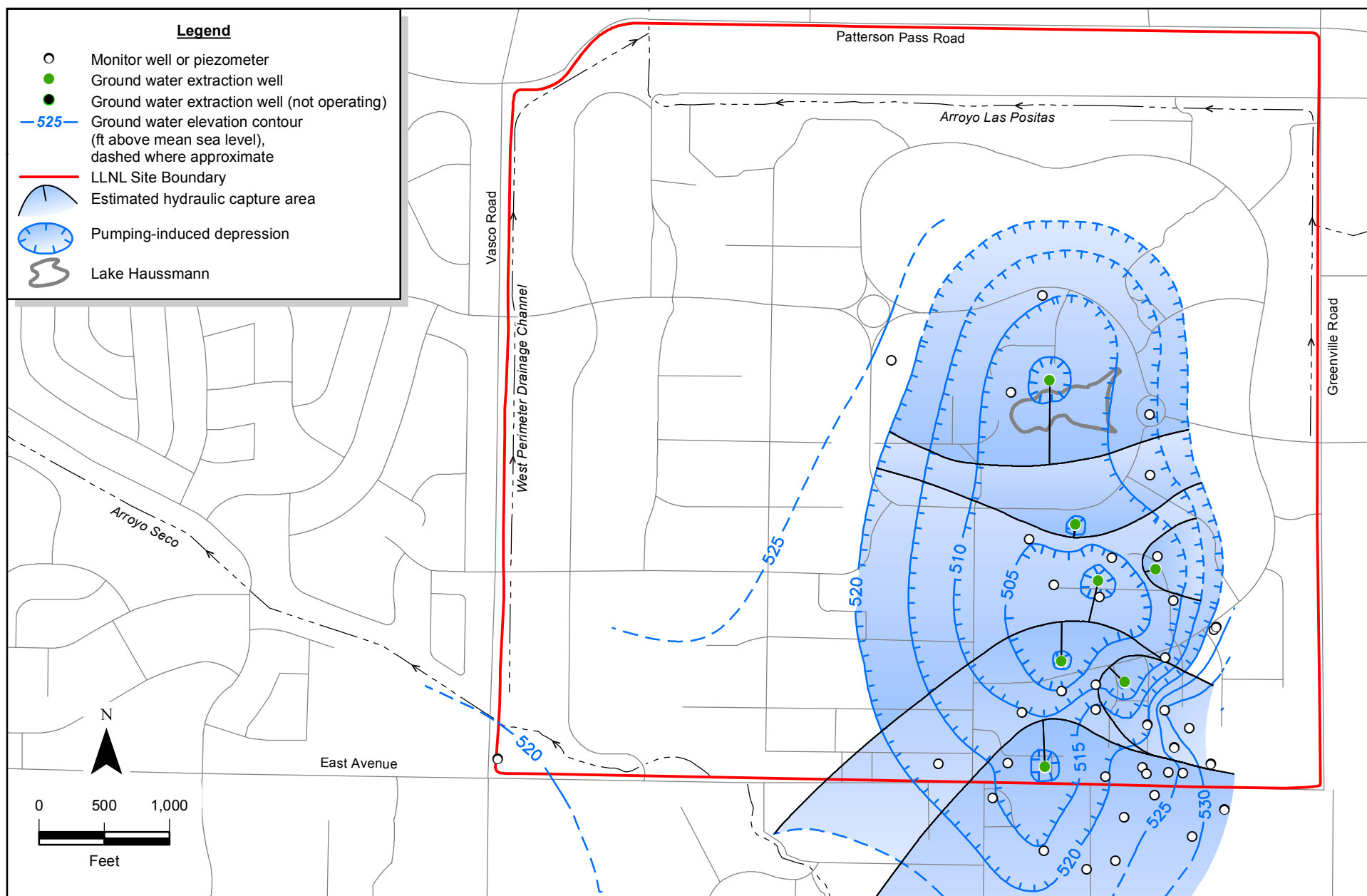


Figure 7. Ground water elevation contour map based on 47 wells completed within HSU-5 showing estimated hydraulic capture areas, LLNL and vicinity, second quarter 2016.